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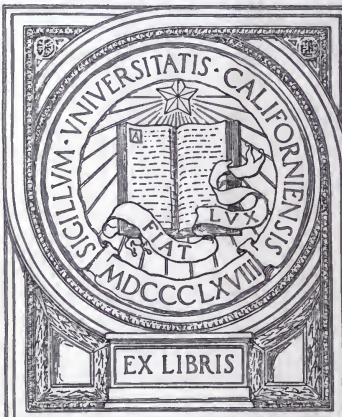
A Manual on the Propagation And Cultivation of the Paeony

By
C.S. Harrison

UNIVERSITY OF CALIFORNIA
AT LOS ANGELES



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A MANUAL

ON THE PROPAGATION
AND CULTIVATION OF

The PAEONY

UNIV. OF CALIFORNIA
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By C. S. HARRISON
YORK NEBRASKA

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FLORAL TREASURE AND RUBRA TRIUMPHANS

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C. S. Harrison's Paeony Manual

INTRODUCTION

("Let the beauty of the Lord our God be upon us.")

How can it be, unless we give it a hearty invitation and a cordial welcome. Over every home, hamlet and farm there hangs a divine ideal of what the place should be, just as the plan of the stately building hangs in the office of the architect. Pull down the plan and work to it, and you will be amazed at the result. All around us are surprises of loveliness, if we would only let them reveal themselves. How rich we would be if we could only reach out and take our own!

I am the child of a King. My hoe is a magician's wand. I touch the earth, and lo, thousands of forms of loveliness spring up to salute me. When I work, there thrills through my soul the ache and eagerness of the overshadowing love to give a revelation of His gifts of beauty to the world.

The good Lord never has had a chance to glorify and cheer this somber earth.

I love to work, to get near the heart of good old Mother Nature and go into her inner temple and help her work her miracles. We tread on the verge of a vast empire, whose splendors are just coming to our vision. We have reached a point where we can do great things. The parents of our great families of flowers are ready to give us a new progeny.

In summer my place is a garden of delight. I believe in adorning Beulah Land which lies on the hither shore, that it may give a forecast of the glory beyond. The heavens are the flower gardens of God, each sun shining in its own robes of splendor. One is a sapphire, and that a glowing amethyst. There is an opal, and beyond an emerald. There is a blazing topaz, and there swings a flashing diamond. When the great Horticulturist drove His plowshare through the fields of azure He sowed the furrows with stars.

The Author of beauty has great treasures of loveliness down here if we will only reach out and take them. Less than six years ago my place was a patch of rank weeds. Now, every morning, from early spring till the hard frosts of autumn, thousands of flowers salute me. The Paeonys are in their glory, 50,000 in 400 varieties, many of them entirely new. Here at the door stands queenly Festiva Maxima, white as the soul of the Madona, with now and then a blood drop, as though the iron had some time entered her heart. What a marvelous flower, seven inches across. Close by is a La Tulipe. Never flower had such a bud, with its interlacing of green and crimson, growing more and more pronounced till the great ball opens, flooding the air with fragrance. There is Baroness Schroder, one of the most ethereally delicate, and yet hardy. What rose can match it? And in the center the lingerings of gold, from which come exhalations of sweetest perfume. There stands Terry's Carnation on dress parade, and yonder Tecumseh, and the radiant Pottsi. Nor

are those of Nebraska birth far behind. There is Golden Harvest, the whole plant striving to cover itself with garments of bloom. Floral Treasure is a fragrant hemisphere of delicate pink, fading to white. We cannot name them. My 400 are much better dressed and better behaved than the other "400" we read of.

Billows of fragrance load all the air, and these thousands of thousands seem in the distance a vast carpet of a grace and splendor too good for earth, fit to be pressed with the feet of angels.

Look this way, and you see great fields of columbines, of fifty varieties in one fascinating blend of loveliness. There the Coerelia we see in the Rockies, photograph of heaven's deepest blue and the fleecy clouds. There is one of pure gold, such as we saw blooming in the Yellowstone Park. These are not enough appreciated. Don't be stingy with them. Plant great masses, and they will be two months in bloom. There is a field of oriental perennial poppies. They are of dazzling, flame-like brilliancy, some of the flowers nearly eight inches across, and inside the most delicate penciling and tracing all done up in jet. It is astonishing how much exquisite and artistic work nature has put out on each blossom.

Then comes the procession of thousands of Gaillardias, with smiling, open faces, blooming all summer, pansies in almost infinite variety. Then come the blessed phloxes, then gladioluses, cannas and dahlias, a great, worshipful host. I go through them all and wonder if this is myself, the hard-working man on whose shoulders sit more than three score and ten years. Is it a miracle? Retiring from professional labors with nerves worn threadbare, in poor health, with hardly any means, yet with "heart within and God overhead," with skilled hands, willing brothers of the brain, so much has been accomplished, and I am in wonderland. A case like this should be an encouragement to the home-maker.

Why this Manual is Written

First. Because there is no work on the subject in the English language.

Second. Because there ought to be.

Having watched these flowers summer and winter, and boarded with them, studying their wants and characteristics, and finding out the most successful modes of culture and propagation, I feel that they should be more fully introduced to the public.

To me it seems that their hardiness, fragrance, adaptability, supreme beauty and ease of propagation place them in advance of all other flowers. Again, they have a mission in the great, bleak northwest, where they succeed most admirably, the very best of all, where so many others fail

This is not copyrighted. Quote all you like from it, simply giving credit for it. We would not put chains on the sweet Evangel of beauty. Let it go forth to cheer and brighten the world.

CHAPTER I

What the English Say

The following is taken from Kelway's Manual, probably the finest ever published. The Kelways are paeony princes, and have done much to bring these glorious flowers to the front. Both Queen Victoria and Alexandria have paid high tribute to their efforts.

Herbaceous Paeonys.—If you look out "Paeony" in a common or garden dictionary, you will find therein the bald information that it belongs to the natural order of Crowfoots—Crowfeet seems a etter plural, but that is neither here nor there—and that the flower is named after one Paeon, a physician, who first used it medicinally "One Paeon" must be looked for in the dim obscurity of legendary ages. In days mediaeval, when simples were so curative and faith so strong, the Paeony was known as a gallant herb of the Sun, under the Lion, good for the falling sickness, the black seeds thereof being taken at bedtime, possessing great virtue against the incubus; "but we doe commonly calle it ye nightmare," wrote an old scribe. Infused in sack, and drunk before and after the new moon, it was sovereign against weakness in the back; while, in the case of children, the surest way to ease them was to hang a bit of the root about the neck. Even in those archaic times the flower was known by the name it bears unto this day, and we must go yet further back into the mists of antiquity for its title, for our Paeon was the physician who ministered to the wounds received in the Trojan war, and the heroes to whom he ministered were none other than the immortal gods themselves. The Paeony is a native of Siberia and the whole of northern Asia, of Southern France, and of Spain. One species has long been known to grow on an island, called the Steep Holme, in the mouth of the Severn sea, but I should judge its presence there to be purely accidental. I should hardly think it is indigenous to that frowning but friendly shelter. Herbaceous Paeonys should be in every garden; of that there can be no doubt. What would a cottage garden be worth in May time without its rich, red "Pyannies?" But these—their high-sounding scientific name being Paeonia officinalis are but the type of the beautiful flowers that are the result of years of patient cultivation, and the marvelous developments that have been made in the last decade are truly remarkable. The old red Paeony has a strong, pungent savour, tonic and stimulating, perhaps, but not one that would be distilled for scenting a lace handkerchief, withal; whereas in the case of the new kinds, hybridization and intercrossing have changed all that, and the Paeony must henceforward rank amongst the scented flowers. These beautiful and most decorative plants are, I am assured by a noted grower, as hardy as paving stones. They are, moreover, of the easiest possible culture, and amenable to the treatment ordinarily meted out to herbaceous plants, never dainty in their requirements, and flourishing exceedingly well in the most ordinary garden soil. I now where the very Paeonys grow from which this photograph was taken. I could name dozens of varieties of this perfect flower, and rhapsodize over their delicate loveliness with great satisfaction to mys elf, but here I must content me with naming six different kinds, of distinct characteristics, and here they are: Lady Beresford is a large-flowered variety of a shade of softest blush, which might be even called white by a careless observer. It is the tips of the petals which are so softly pink, and at their bases they deepen into buff. Olivia is a truly lovely flower, yellow at first sight, but a closer view discloses the fact that the guard petals are white and very broad, enclosing a center of sulphur, a peculiar and most delicately tinctured blossom. Bioni is another uncommonly shaped blossom, with guard petals of delicate blush, enclosing thread-like segments as "raggedy" as a Japanese chrysanthemum These segments differ in color from their guard, being cream. Sainfoin is a very brilliant flower of deep rose color, a striking contrast to the others just named. Labolas is rose, purple dyed, with short inner petals tipped with gold, a dream of regal sunset.

Lyde is a rose-colored flower, with a paler center, pink tinted, and with it I must close my list for lack of space. This flower has the most powerful yet delicate scent of pure rose attar. It is like the concentrated essence of all the rose gardens of Persia. Some of the Paeonys have a scent that seems compounded of roses and violets, others are reminiscent of roses and summer chrysanthemums, but Lyde is all rose-scent throughout, and of the very purest quality at that.—The Ladies' Field.

The Many-Sided Paeony.—The Paeony is among garden flowers what the mocking bird is among birds. In acquiring its right to range as a flower of to-day it has stolen the

perfume of the rose, and stolen the tints and shapes of petal from many of the most beautiful of our summer flowers Without the Paeony, therefore, no flower garden is complete. There are two kinds of Paeony, the Herbaceous and the Tree Paeony, and they have their legendary lore like all aristocrats of the garden. . . . Down at Langport, in Somerset, there are three generations of the Kelways, and it is a pleasure to tramp with either one or the other, father, son, or grandson, over their broad acres of Paeonys and Gladioli. In your walk you make a close acquaintance with all manner of flowers. Naturally the first trek is for Paeonys. "You cannot very well kill them," is the reply to our question. "They are as tough as a Scotch thistle, and as full of vigor as a common marigold " "Yes, those rows after rows of deep-colored or crimson spikes that you see fighting their way up through the earth are Paeonys just making a start to grow. The colors vary from snow-white to yellow, yellow to pink, and pink to maroon; also there are purples and shades of violet, but Nature has so far refused to produce a blue variety. Certainly a Paeony can give you a grand spot of fresh color in a shady corner, for, although the flower enjoys the sun, it does not object to the shade. Another idea: if you like flowers on your lawn, but do not want to cut up the green by placing beds here and there, plant Paeonys, either kind does well. The Paeony will thrive on almost any soil. Up to a point good manure intensifies its color and improves its form. As to the lifetime —once planted the plant goes on growing, and multiplies exceedingly. You need not take up your roots. except when they have grown too large and want separating The selected varieties really give you a garden of sweet-scented, rose-shaped flowers before the roses come in, as well as a little forest of beautiful foliage, for the color of its leaves is often as lovely as the bloom of many flowers. Then the Herbaceous Paeony, with its beautiful foliage, is most suitable for church decoration. There are almost any number of varieties. For thirty years we have crossed and re-crossed, married and given in marriage, brothers, sisters, uncles, aunts, and cousins, for in the plant world there is a natural and not an ecclesiastical law, so that like the old lady in the shoe, we have so many children that sometimes we don't know what to do. . . . No plant travels better than the Paeony." —Westminster Budget, 1898.

CHAPTER II

Letter from Wm. Kelway. The Kelways have done more than any other family to bring the Paeony up to its present position.

LANGPORT, ENG., SEPT. 3d, 1901

MR. C. S. HARRISON.

DEAR SIR:—In reply to your kind solicitation to write an article on the Paeony for your "International Paeony Book," I must tell you that it is quite out of my line, but it is particularly interesting to note the various forces and freaks of nature exhibited in the Paeony from the effects of cross fertilization, which has occupied thousands of hours of my life during the past thirty years. To notice the produce of parents of a variety with only three or four rows of petals, with its stamens, evolve into petaloids, and then again noticing the produce from this petaloid parent with its petaloids evolve into petals, and then again to cross fertilize this variety, and to notice its progress, with its stigmas evolved into petals, so that at the end we find this Paeony with its beautiful original guard petals, with a cushion of petals instead of stamens, and surmounting this cushion petals, as in Paeony "Agnes Mary Kelway," evolved from the stigmas, representing a comb of feathers like those on a cockatoo's head; to know that one is handling a plant that bears any amount of heat or

cold, that will grow in any soil, that it is not infested with any fungus or blight or vermin; that its foliage is beautiful in early spring, coming out of the cold earth various shades of green, red and purple, just at the time when the Daffodil takes the winds of March with beauty. And so it goes on, turning to the deepest, glaucous green in June, when the gorgeous flowers surmount the noble plants, giving such an array of magnificent blooms in every shade of color except blue, all dying off into lighter tints in July, leaving on some varieties their capsules, which when open show their seeds of very pretty tints, and in the British variety, "Corallina," they are particularly brilliant, and may be well compared to Amethysts. The leaves at the same time change to crimson, purple, chrome, and a rich brown, shading off to that rich, lighter brown which is to be found in the bracken after it has been seasoned with the winter's blast. Cross fertilizing has also done a great deal to increase the perfume of the Paeony, giving to a numerous variety of them a combination of the scents of the Violet and the Rose. The Paeony has a longer run of employment for decorations than any other plant, the shoots, flowers or leaves being in use from March to November.

Yours Very Respectfully, WM. KELWAY.

We have just received the following letter from Superintendent Bedford, of the experiment farm of Brandon, Manitoba. As we are at work on an International Paeony Pamphlet, and desiring to make it as complete as possible, we are sending letters to different parts of Europe and Canada, and here is the reply kindly given by Superintendent S. A. Bedford:

BRANDON, MANITOBA, Jan. 2, 1903.

C. S. HARRISON.

DEAR SIR:—Your letter of December 24th received. The herbaceous Paeonys do exceedingly well here. Our collection is a small one, but we find no difficulty whatever in wintering them, even without protection. We simply keep them free from grass and weeds, and let nature do the rest. In my opinion, they are by far the best perennial for cultivation in this northern climate. Some of our plants have as many as sixty bunches of blossoms. I am looking forward to the time when we will have a complete collection of this beautiful flower here. If at any time you wish me to test a root or so, I shall be glad to do so. I shall try and send you a cut showing some of the Paeonys growing here. We are getting a very large immigration from the United States to this country, and you can tell your people to bring the Paeony roots along with them, as they grow well all over Manitoba and the northwest. We do not even mulch or manure our plants. The soil is rich, and the snow, though not deep, is sufficient for protection.

Yours, S. A. BEDFORD.

This testimony is also substantiated by Dr. William Saunders, general superintendent of all the experiment stations. I have been sending some to Assiniboia, a province lying west of Manitoba, where they also do well. A friend told me of an article he saw concerning their successful

growth in Alaska. So, when we have flowers called for from Mobile to the Arctic circle, we need not fear we will overstock the market right away.

U. S. Experiment Station,
Brookings, S. D., Feb. 26, 1902.

Mr. C. S. Harrison.

Dear Sir:—I was glad to receive your letter and to learn that you are doing so much in ornamentals. I do not think it would pay you to plant any cuttings of conicera this spring. I only have a very few plants of each kind, and cuttings, in order to do well, should be planted in the fall. At least that has been my experience. In bulletin 72 I have mentioned my experience with the Paeony. The following note may serve your purpose: The Tree Paeonys are tender, and winter kill in the Northwest, but the Herbaceous Paeonys are perfectly hardy in South Dakota without winter protection. We have many varieties under cultivation here, and all appear hardy, and flower profusely. Of all herbaceous plants the Herbaceous Paeony should be the first one to plant in the garden of every dweller on the northwestern prairies. They are as hardy as pie plant, and do well with no more care than that given to pie plant. It pays to manure both plants for the best results. The number of cultivated varieties of Paeonys runs up to a thousand or more, and the list is continually being increased by the raising of new varieties from seed. This will be an interesting line of work for the amateur, as he may obtain varieties superior, or at least equal to, any of the many sorts now grown by nurserymen and florists, but the planter who wants a sure thing will prefer to plant named sorts. The Paeony is steadily gaining favor with florists all over the country, and some plant them by the acre for the purpose of growing flowers in quantities for market. Some people call the Paeony the "King of Flowers," but this title is probably claimed by many other flowers, each one having its devoted adherents.

Yours truly, Prof. N. E. Hansen.

CHAPTER III

Classification

I have spent much time in the endeavor to search out the original families of this remarkable flower. From the number we judge that there is yet great room for progress, and perhaps we have only just begun with our hybridizing. By permission I quote from J. W. Manning, in "American Gardening," of March 5th, for which I tender grateful acknowledgment:

"Until the forthcoming Paeony list of the American Paeony Society is published, I believe quotation of variety names should be used with

great care, and believe that the best interest may be served by giving the following list of species and their distinctive characters:

Paeonia Albiflora, Pallas. A Siberian species introduced about 1756, and one of the forerunners of the hybrid herbaceous forms, two to three feet high, with deep, rich green, often veined red, leaflets, and bearing clusters of three or more very large, broad, overlapping petaled white to light pink single flowers, and showing globular masses of golden anthers in the center of each. June. Reevesiana, Fragrans, Whitleya and Festiva show close affinity to this species.

Paeonia Anomala, Linn. From Europe and Asia, with finely dissected, smooth foliage. Solitary, single, bright crimson flowers, and distinct in the large size of the petals and the peculiar compound, leaf-like sepals. Two feet. May. Its varieties, Insignis, Peter Barr, Smoutti and Intermedia are now recognized, being more distinct in the character of foliage than otherwise.

Paeonia Arietina, Anders. A tall south European species, distinct in the stems, being hairy toward the top; the foliage quite glaucus and downy beneath. The flowers are large, dark red and solitary, and the seed pods are prominently covered with hairs. The varieties range through shades of pink and red.

Paeonia Browni, Dougl. A northwest American dwarf species with glaucus foliage and dull, brownish-red flowers, borne on re-curved stems.

Paeonia Broteri, Boiss and Reut. An early-blooming, European species, similar in foliage and habit to Paeonia Officinalis, with red flowers varying to white.

Paeonia Coccinea. A reported species in the Royal Botanical Gardens at Glasnevin.

Paeonia Corallina, Retz. Asia Minor. A vigorous species, two to three feet high, with dark green foliage, the lower leaves of which are only twice divided. Bright, crimson flowers, with short, rounded petals and seed vessels of a bright red color.

Paeonia Coriacea. Boiss. Similar to Paeonia Albiflora, with even broader leaflets, bright crimson flowers, purple stigmas and smooth seed vessels.

Paeonia Corsica, Sieber. Closely related to, if not the same as, the last.

Paeonia Decora, Anders. From southern Europe. A close species to Paeonia Arietina, with peculiar horizontal foliage diminishing toward top of the stems, which are two to three feet high. The crimson flowers are small, with few narrow and small petals. Pallasii, with narrow leaflets, and Elatior, with broadly oblong leaflets, are recognized varieties.

Paeonia Emodi, Wall. A Himalayan species, two to three feet high, closely related to Paeonia Anomala, with smooth, finely cut foliage, pale beneath. Flowers pure white, borne in clusters of four or more.

Paeonia Humilis, Retz. A French species of low growth, with somewhat velvety foliage, and with bright red flowers on short stems, and borne in clusters of three or more, with smooth seed pods.

FESTIVA MAXIMA

C. S. Harrison's Peony Garden.

Paeonia Lutea. Recently discovered species from Yunnan, and introduced by Abbe Delavay, growing about two feet high and bearing small, bright yellow flowers. The plant is somewhat shrubby in habit, and allied to Paeonia Moutan. Not sufficiently tested as yet as to hardihood.

Paeonia Microcarpa, Boiss and Reut. Closely allied to P. Humilis, with even dwarfer habit and more downy foliage. Presumably a native of France.

Paeonia Mollis, Anders. A dwarf Siberian species, with dark green upper surface to foliage, and distinctly glaucous and velvety below. Flowers pink or red, and borne singly.

Paeonia Moutan, Sims. The well-known Tree Paeony, a native of China.

Paeonia Officinalis, Linn. The oldest cultivated species, first grown in 1548, with dark green foliage above, pale green beneath, growing two to three feet high and producing single, dark crimson flowers, and with re-curved crimson stigmas. Early blooming, and a parent of many double anemone-flowered and semi-double varieties. A native of Europe.

Paeonia Paradoxa, Anders. A very dwarf, almost tufted, Turkish species, with three-lobed incised foliage and purplish red flowers borne singly, and with seed vessels closely pressed together. There is a variety, fimbriata, with double purple flowers and projecting purple stamens.

Paeonia Peregrina, Mill. An European species similar to Paeonia Officinalis, but with very smooth, deep green foliage above, pale green, hairy beneath. Flowers bright crimson. This has given rise to two good double forms and a number of varieties with single whorls of petals.

Paeonia Obovata, Maxim. A little known species, with "lower leaves not more than twice ternate; flowers large, red-purple, and glabrous seed vessels."

Paeonia Pubens, Sims. Allied to Paeonia Arietina. Leaves hairy below, margins red.

Paeonia Russi, Bivoni. A Sicilian and French species varying from Paeonia Corallina in decidedly hairy undersurface of foliage.

Paeonia Sessiliflora, Sims. Nearly related to Paeonia Mollis; very low; flowers short-stemmed, pure white.

Paeonia Triternata (Daurica) Pallas. Three feet. Differs only from Paeonia Corallina in the rounded leaves, greener stems and rose-colored flowers. A native of Caucasus.

Paeonia Sibirica. A little known species in the Glasnevin Royal Botanic Garden list.

Paeonia Tenuifolia, Lin. A Caucasus species eighteen inches high, with light, soft green, very finely divided foliage, and dark crimson, yellow anthered flowers and spirally recurved stigma. The earliest blooming species There are double and semi-double types of this.

Paeonia Wittmanniana, Stev. A Caucasian and north Persian species about two feet high, with coarsely divided, dark green foliage, downy beneath and bearing showy, incurved, pale yellow flowers, one to a stem. Rare.

CHAPTER IV

Propagation

It is highly important to know how to multiply these valuable flowers, for the process is slow at best.

You buy a choice Syringa or Philadelphus, and you can divide the roots and plant cuttings and increase them very rapidly. You can, in a few years, run a new kind of a fruit tree up into the millions, but you cannot rush the Paeony. One of the best on the list originated in 1835, and it is impossible now to supply the demand. If you raise from seed you never reproduce the original, and it takes from five to eight years to know what you are getting. But with care, by root division alone, you can secure from one to two thousand in ten years. There are three modes of propagation; by division, from roots and from seed.

We have a different system, where we raise for roots, than where we propagate for flowers. By the best of care on the richest ground you can hurry them considerably. But there is a great difference in them. L'Esperence and Victoria Tricolor multiply rapidly, while J. Discaisne, though a glorious flower, wants about four years to double itself. Others equally as good in bloom are much more profitable. From Baroness Schroder, La Tulipe and Richardson's Rubra I have cut thirty roots in four years from one By dividing every two or three years you have perfectly healthy and vigorous roots. I have bought those that must have stood twelve or fifteen years. The buds were partially decayed, and they had great, club-like roots. There is no advantage in such large roots. A two-year-old plant, sound and vigorous, is much to be preferred.

A neighbor wished me to do something for his Paeonys. They had been twenty-five years in grass and weeds. They were crowding and exhausting each other. They would bud, but had no vigor to expand the bloom. I took up great clumps, and found them much decayed. I cut them up, planting the buds and what little root I could secure with them, and in two years had as strong and vigorous stock as I ever saw. My land consists mostly of city lots, so I must plant closely in rows, about eighteen inches apart, and eight inches in the row. Of course they could not stay long. I have the advantage of irrigation if necessary. I have often planted buds alone, with no root whatever. One fall I put in thirty, and the next year had twenty-seven fine plants.

Dividing the Roots

This is difficult, and requires patience and judgment. Some have a distinct cleavage, and are easily separated. Others, like Marie Lemoine, have no cleavage, but are gnarled and twisted. Some, like Princess Ellen, have roots like a ball. Many are very tender, and as you begin to divide, they will snap like pipe stems. This is bad, for there are the roots, and you need them to go with the buds. If you lose them it will

take a year or two to replace them. Let them lie in the shade a few hours and wilt. This toughens them and does not hurt them a particle. You can immediately restore them to their plumpness by putting them in wet moss, or keeping in or planting in moist earth. This is a very important matter. I got onto this process after a good deal of annoyance and vexation. In planting, have your ground in the best of order. I have deep, rich soil, fertilized with hen manure when I can get it; only prepare your ground beforehand, so the fertilizing will be assimilated. Make a deep, wide hole with the spade, insert the root, press the earth close about, put the bud two or three inches below the surface, and be careful not to bruise it. It is a good idea to put a coat of manure over them in winter.

Planting for Flowers

You can raise roots and blossoms at the same time, but you cannot multiply as rapidly as where you raise solely for the increase. Of course you will raise many flowers while you are propagating. The ready bloomers will get in their work the second year, and at that time we often have quite a burden of bloom. Some sorts require time to come to their best. Usually the largest and latest sorts need a year longer than the others, while some kinds will bloom on the least provocation. Victoria Tricolor is noted as an early, prolific bloomer, and a ready multiplier. It often blossoms the first year.

To raise the largest and finest flowers, the ground should be very rich. We often cart on soil and manure to increase the depth. Rich, bottom land, well manured, is best. The ground to be planted in the fall should be prepared in the summer. It should be spaded two to three feet deep. Plant in rows four feet apart and three feet in the row, so you can cultivate with the horse, if necessary. Sometimes I have prepared ground in this way: On an eighth of an acre there were scattered eight loads of hen manure, and a strong team plowed it two furrows deep and took the whole day for it. This thorough preparation is necessary for the best results and the largest blooms. Of course you do not have to be at such expense. They will grow, thrive and bloom on good corn ground. By this process you are raising roots as well as flowers, and at the end of ten years you will have an enormous crop of the former, but they will be large and not so easy to handle.

In planting to raise flowers, be sure and take good, strong roots. Such will come into bearing much sooner than small ones. I should not plant clumps, but heavy ones, and they will make the clumps soon enough.

I have gone into detail because I deem the Paeony the queen of flowers, and it should have the best possible chance.

Raising From Roots

I have watched this process closely for years, and have found one thing, perhaps not discovered by others. The root is small where it joins at the top; it swells in the center and then tapers. Now if a root is bro-

ken at the center, the lower portion never can form a head. It will try hard. A calous will be formed at either end. The poor thing will do its best to put a head on itself, but cannot make it. At the end of the first year the root will yet be sound; the second year the top will begin to decay, and the third year it will be rotten. The upper portion of this same root, where it breaks from the plant, will have a good show for forming a head. Kinds differ. The Edulis Superba and others of its class are stored with vitality. I have often stripped off roots, like fingers from the hand, and planted them, and almost invariably a bud would form the first year and be ready for business the next spring. Sometimes it will take two years to form a head, but in the main you will succeed better to carefully divide and plant root and bud together.

CHAPTER V

Raising from Seeds

We must pay more attention to this. There is no reason why we should not produce more rare sorts. There is a fascination here. You never know what is coming. Just beside you, in the unknown, there is a rare, lovely and fragrant flower waiting to surprise you. You wish to give it a chance to materialize, so you are on the alert to welcome your new creations. One in a hundred will be fair; perhaps one in a thousand will be superior.

How about hand pollenization? I should let the bees attend to that.

Note this fact: You must secure seed from the VERY CHOICEST KINDS. Here we are handicapped. Great, splendid ones, like Festiva Maxima, Tecumseh and Richardson's Rubra Superba, can go no further. Those grand, double ones have reached their limit. It is well-known that the single and semi-double are very prolific, and yield any amount of seed. When Terry and Rosenfield, in the west, commenced their work, they secured seed from the very best. Thirty years ago Mr. Terry began with seeds from the choicest flowers that would yield any, and he has given us some fine ones. So with Rosenfield, who gave us Floral Treasure and Golden Harvest, that now stand well at the head of the procession.

Other propagators I know of have used, I am sure, seeds from inferior plants, and as like begets like, they have very inferior strains. One grower, by a good deal of enthusiasm and fulsome praise, has sold several which prove to be a disappointment. The whole stock, with a few exceptions, is coarse and cheap, and does not sustain itself. It is remarkable that you may raise a thousand seedlings, and there will be no two exactly alike.

What shall be done with the thousands of rejected ones? We have too many named ones already, about two thousand. Shall we throw them away? By no means. If you never saw a Paeony and were intro-

duced to the thousand left behind, you would call them fine flowers, and so they are. In the hosts of these common ones I never saw a really poor one. They are all good, but there are the better and the best. I would say keep them. They can be used for parks and in masses. Put them on your cheap list and classify them in colors. There are many people who insist that a "piny" is a "piny," and that is all there is of it, and they will insist that you keep a "bargain counter," for they think they are terribly cheated if they have to pay more than twenty-five cents for a "piny." They are much like the young darkey who, by mistake, got a license to marry Lucinda, when he had agreed to marry Katie. It would cost him something to get a new license. He proved equal to the occasion, "Dere aint no $1.75 difference between dem two niggers, and I'll just marry Lucinda."

We are glad to note cheering success in originating new varieties in America. We need to go in on a larger scale. Mr. Kelway, of England, and Mr. Terry, of Iowa, have given us over 100 each. The main difference between them is, Kelway has used the most ink. I think Terry has never photographed one of his grand creations. We are happy, however, to present some in this Manual. I think it would be much better to go heavily into the business of propagation than to send so much money to Europe and import so many disappointments.

There is a future for this industry. For instance, the new Japanese, with their peculiar stamens, are very unique. I have about twenty-four kinds. They seed readily, and, having them hemmed in with other fine varieties, I have great hopes of a new race of hybrids. I also intend this fall of 1904 to plant about two quarts of the very choicest seeds that I can secure. I have large quantities of my own and have engaged more, and from the coming thousands I hope to see some of superior merit. As to those which will not be named, keep them. The great empire of the northwest will need them. Most of those raised by western growers yet go east, and the bleak northwest is waking up to their merits, and will yet absorb millions.

Care of Seeds and Planting

It is better to gather the seeds before they get thoroughly dried, and plant immediately, or mix them with moist sand and plant just before the ground freezes. In the west, often our falls are so dry that seed, at the ordinary depth, would dry out. Those can be planted that are thoroughly dried, but it takes two, and even three, years for them to germinate. They should be planted in rows about two inches deep. If, in the spring the ground should incline to crust, it may need pulverizing with a rake, so that the little plants can come up readily. If sown in a seed bed they can be removed when a year old. Though the roots will be small they will be full of vitality. If far enough apart so they can have a fair chance to develop, it is better to let them remain till they bloom. But it takes some years for them to fully show their individuality so you can know what to depend on. Don't be in a hurry. I have known rejected ones to develop flowers equal to almost any, and I have one which was discarded while young, which is now near the head of the

procession. Young plants do not often go back, but show up better as they grow old. The Paeony has almost infinite patience, and you must have a little even in this age of steam and lightning.

CHAPTER VI

The Hardiness of the Paeony

We know of nothing in the vegetable world which has the vigor and hardiness of this plant. The root is like the grip sack of the traveler which contains the supplies for his journey. It will come to us from Europe and bring in compact form foliage, flower and life. We know of nothing that will stand more hard treatment, exposure and neglect. It may be left on the ground, exposed to the sun, for days, and be badly withered, and yet it will revive and grow. Often we find, where we have cut up plants in the fall, that tiny buds, so small as to escape notice, after freezing and thawing all winter, will throw out shoots and tiny rootlets, and we have often saved them. One spring two roots of La Tulipe were left in the barn two months, till, to all appearance, they were dead. They were planted the first of June, and they immediately revived and grew.

One winter we had several boxes stored in a root cellar. They were poorly packed. Someone left the door open and they were all frozen solid. The door was closed, and they remained frozen till spring, when they were planted, without the loss of one. It is no uncommon thing to keep a lot in boxes seven months at a time with but slight packing. I once had a remarkable experience with a lot from Kelway, England. They came over in reasonable time, but were delayed in a warm office at Lincoln, Neb., a month before I was notified. The box was dried out and full of cracks, and the moss was dry as powder. The roots were black, and snapped like sticks. The buds were shriveled. I had the expressman look them over, and all pronounced them dead. There were thirty roots, some of which cost $2.50 each. Of course the express company had to pay damages. Taking them home about the first of November, I cut off the dead roots and planted the buds in moist earth in a box in the cellar. At the end of a month the buds began to swell. December 1st, they were planted out, and were frozen all winter. They all grew but one, and one of them bloomed. Of course it took an extra year to form new roots. They seemed much like the Mexican resurrection plant.

They are like the Rocky Mountain burro that bears any amount of misuse or neglect, and yet patiently plods along. Often for years they must bear neglect in grass, or the hard earth tramped solid about them. And yet they hang on, doing the best they can. Yet while they patiently endure so much, there is nothing that responds with more grateful alacrity to generous treatment. A neighbor had an Alba Sulphuria, which

had bloomed in utter neglect for twenty-five years. I bought the clump, he retaining a couple of roots He planted his in the grass and hard earth, digging but a little space for them. In four years they have not bloomed or grown. They could not. They could only live. I planted my part in the richest ground, and how they increased and blossomed. In about four years I had nearly one hundred plants.

All the great west and northwest are well adapted to them, and it should be a matter of encouragement that the finest flower that blooms will give its cheer to a vast region where other flowers cannot grow. They are hardier than the pie plant. We pay out millions for choice roses, and other things which cannot endure our winters. It is much better to plant an absolute success than a sure failure.

"Playing Possum"

Possessed of a marvelous patience, this plant will often bide its time, and seem dead, when it is only gathering its forces for a vigorous push.

One fall I planted quite a row of the splendid Princeps. Next spring not one of them came up, nor did they show any signs of life during the summer. I was preparing to use the ground for something else, when, after lying dormant for eighteen months, the whole row pushed up and commenced a vigorous growth.

When you dig a lot from the same ground, there will be many spring up the first year, and often more will show the second year, having taken so long a time to form a head. It is my custom in cutting up, to replant the same row to the same kind, to avoid any mixture, and if I cannot do this I am careful to plant between where the rows were, so the strays will not come up in the same row with those I am planting, but between them.

CHAPTER VII

Thoroughbred Live Stock and Thoroughbred Flowers

I used to keep thoroughbred Jerseys and Shorthorns. Though I enjoyed it they were a constant care. One night I was awakened by a fearful crash. I wakened the boys and told them to bring the lanterns. Rushing out, I saw in the barn two balls of fire. They belonged to the Shorthorn. He weighed a ton, and every pound of him was in fighting trim. Aiming a pitchfork a suitable distance below those blazing orbs, I caught him in the nose. Then the lights came. We secured him and led him back to his stall. It seemed the Jersey got loose and thought it a good time to take revenge. The Shorthorn tore himself loose, drove the Jersey back to his stall, and, with one tremendous thrust, hurled him through the side of the barn. I was younger then, but I don't want any

more. I have seen men who had built up a fine, choice herd of hogs; then came the cholera and wiped them out. Beautiful flocks of fowls melt away with disease, become the prey of sneaking beasts or the chicken thief.

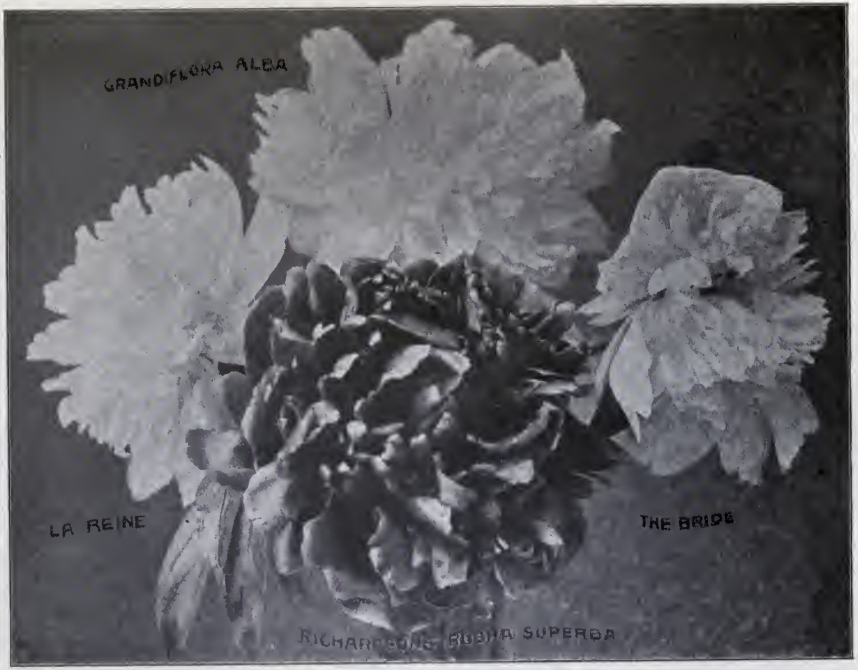
It is different with thoroughbred Paeonys. They do not tear themselves in wire fences. You know where they are nights. They do not eat their heads off in winter. The food costs nothing. You can go off on your summer vacation, and they will be there when you come back They multiply as fast as live stock. There is more money in them, legitimate, honest gain. Sixteen years ago a man laid out $50 for choice strains. For some time he has been selling $1,000 worth a year.

I bought a fine plant for $1. In five years I sold $18 worth, and had eighteen roots left. One choice variety in the same length of time brought in $34.00, and I had fifteen roots left. One fall I had an order for 500 common mixed sorts for $6 per 100. It took but a small piece of ground to furnish them. My man, who had worked on the farm, was astonished. "Here," said he, "we have dug $30 from a few rods of ground, and if we got that from two acres of farm land we would do well "

Is Paeony raising a fad, that will soon pass away? It cannot pass; people will not allow it. In staid old Europe the interest has fairly commenced. In our eastern states, where they can raise Azalias, Kalmias and Rhododendrons, the demand is on the increase. Most of the stock of western growers yet goes east. In the west we cannot raise the flowers above mentioned. They will have nothing to do with us. They are aristocratic easterners that will die before they will live with us. I thought our hot suns and drying winds too much, so I got 1,000 of the hardiest kinds I could hear of, and put them under a screen. Kalmias, Azalias, Rhododendrons, all dead in a year, despite the tenderest care. Do you wonder that we love a flower that will step in and take their places, one that never grumbles nor pines, and is never homesick, that is more fragrant and lovely than the best of them? I have attended some of the most famous flower shows of the east, and here in Nebraska we can raise as fine Paeonys as anywhere on earth. We plant roses, and they kill down and dwindle away, but the Paeony stays by us. Millions are needed for our western states. Billions are needed for the Dakotas, Minnesota and Manitoba, where they do as well as in England. When the finest flowers on earth are fitted for such a vast empire, and they will grow and thrive where other things will not, you can depend on them.

Talk about Ginseng for profit! Go to raising Paeonys. This is work for ladies. Already many are going into it. There is much less care and expense than in raising chickens, though as light work the two go together. The hen is mightier than the sword. She seems insignificant, yet her produce and progeny every year are greater than the output of all the gold mines, and the more eggs and chickens you raise, the higher they get. The two enterprises are in woman's realm. Mrs. Pleas, of Indiana, has raised some fine new sorts. One she sold for $100, and another for $150, besides having thousands of dollars' worth of enjoyment from her floral friends.

When you take into consideration the growing value of cut flowers,


GRANDIFLORA ALBA
LA REINE
THE BRIDE
RICHARDSONI ROSEA SUPERBA

H. A. TERRY, Crescent, Iowa

BELLE OF YORK PRINCESS OF WALES
JUNO

you have three harvests from your Paeony bed, one in the spring, the blossoms in summer, and again root sales in the autumn. This delightful and profitable employment, together with the fascination of raising new kinds from seed, will give a zest and joy to living which cannot be found in any indoor employment. There is the delight of seeing a transformation going on, the brown earth putting on robes of beauty while you are culling forms of loveliness out of the unseen, taking the rainbow and moulding into shapes of wondrous fascination.

CHAPTER VIII

Adaptation

The Moutan or Tree Paeony does remarkably well in England and in our Atlantic States. It blooms grandly and grows to be quite a bush. I have grown them in Nebraska for more than fifteen years, and find them very shy bloomers. They will grow and increase all right, but I think the buds are sensitive to our trying climate. It is possible these will do well where the herbaceous ones are not satisfactory. I think, as you go south into the Gulf states, especially into the sandy soils, the Chinensis will not be satisfactory, and perhaps those regions will be just the place for the Moutan.

I understand they can be used successfully for forcing, and think this would be feasible. The trouble with those grown out doors is supposed to be the severe spring frosts. This difficulty would be obviated by bringing them into the green house. In those sections where you can depend on them, the blossoms are of resplendent beauty, some of the newer sorts almost as large as a dinner plate.

They are usually propagated by putting a slip into the fleshy root of the herbaceous kinds. It will use this for a time and then discard it for its own. The stools can be readily separated, and if you wish to increase faster, graft the tops on their own roots much as the nurseryman does his young apple trees, using the lip or splice graft. Care must be taken, however, to let them knit well before planting out. But if you have patience you can wait for the root division.

The Tenuifolia are the earliest of all. They are single and double. They are not quite as hardy as the Chinensis, as they need mulching in the west in winter, where the cold will be excessive and sometimes there will be no snow. I have had them bloom as early as May 5th. The blossom is like a rose, seated in that delicate, soft, fern-like foliage. The only draw-back is, it is not fragrant. Yet it has an important place to fill.

The Officianalis is the "piny" of our mothers. I remember with a shudder the steeping of the "piny toes" for the ills of childhood. For years I looked with contempt on the whole family on account of the rank and disagreeable odors which came down out of the past. Though this has been one of the mothers of the new and fragrant race, yet much

of the indifference regarding the modern flower dates back to the memory of the sickening odor, so indelibly impressed on childhood.

Again, they are not hardy in the west and northwest. Thousands have planted them and failed, and think the whole family a fraud. We get letters from Minnesota, telling of failures, and in every instance you trace it back to the same old "piny." Six years ago I planted a dozen good, strong roots. The first winter eleven of them died, and it took the survivor six years to furnish one bloom. No wonder, when people judge from these, that they are prejudiced against the whole. The Officinalis multiplies slowly. Others, beside this lone one, have blossomed gloriously and increased rapidly.

I know there are clumps here and there in Nebraska, and when once established and not disturbed, they give early blossoms, following hard on the Tenuifolia. Both these kinds have an entirely different system of roots from the Chinensis, something like clumps of sweet potatoes. In separating them, as in case of the dahlia, you must have a bud go with the root. So please bear in mind, if you live in the bleak northwest, that you are never to order the Officinalis.

Changes of Soil and Climate

Some kinds are more sensitive to their conditions than others. Many varieties of fruits which do well in one locality are worthless in others. Some of these flowers will do better in certain soils and climates than others. Baroness Schroder is called flesh colored in England. In Massachusetts sometimes instead of being pure white it has a grayish tint. In Nebraska it is of snowy white, and one of the most perfect flowers that ever bloomed.

Charlemagne is called an enormous flower in Rochester, but it has been something of a disappointment in other locations. We must not condemn a variety as a fraud if it does not meet our expectations, for it may be a success elsewhere. While we say this, there is probably no flower that does so well under varied conditions. Difference in soil will have something to do. Of course they cannot do as well in light sand or stiff clay as in the rich loam of the west.

CHAPTER IX

Mistakes and Mixtures

There has been no end of trouble from these causes. As we have had no Paeony society till recently, we have had no check on loose methods. So one name has been given to several different sorts. Often the choicer the kind the more substitutes it has. At least six kinds have been sold for Festiva Maxima, and one of our best firms innocently sent

out Grandiflora Alba for years for this variety. There has been no end of confusion regarding the genuine Humei or Thorbeckii, one of our very best. I have bought from many of our leading firms those bearing this name, which were not even distant relatives of it. It is so with the Duke of Wellington.

Holland firms are notorious for their carelessness. I bought of Koster & Sons. They were not what I sent for. They insisted that they were, when I returned their own labels and my order. Then they were not true to name. About that time I bought quite a bill of an American firm, and they proved the worst mixtures I ever saw, though they were packed with the greatest care. I notified them. They supposed they were all right, for they got them of Koster. So many of the Dutch firms are so unreliable that we are sure of nothing. Before me lies a letter of one of our leading growers. He has had no end of vexation. Such methods are in wide contrast to most of our American firms. Visiting the grounds of Rosenfield, I found he had the different kinds in beds by themselves, and while blooming every plant was watched, and if perchance there was a stray it was marked with a stake.

A noted firm in England, which has done more to bring this flower to the front than anyone else, has fallen into careless ways. So one dealer says, "we get only the sweepings of their fields." This is bad, for we supposed we had a firm we could absolutely depend on. Their prices were very high, but we did not care so much for that, provided we got pure stock. Some time ago I sent for two roots of Lady Alexander Duff, supposed to be the best Paeony on earth. They were five dollars a root. I watched them grow, and had my friends look at those plants which were to surprise us with the grandeur of their bloom. When the flowers opened we looked on in a daze of expectancy, when lo, they showed us some inferior single blossoms, on stems about a foot high. They were very short lived, the petals falling in two days along with our expectations. They were just fair 10-cent plants When I ordered, I charged them to return the money if they did not have the genuine plants.

What is the lesson from all this? Patronize American growers. They are responsible. They keep as good kinds as the world produces, and will gladly correct mistakes. They do not hide behind an ocean. We must go to raising new varieties on a large scale. Our growers have now hundreds soon to go on the market as fine as we import.

Difficulties

Where one has several hundred varieties it is hard to keep the stakes all right. The weather will wear off the names in a few months, and they must be re-marked with care. Sometimes the stakes will be broken down. Perhaps an inquisitive visitor may pull one up to read the name and set it back facing the wrong way. So, with the greatest care, mistakes are inevitable. I have bought of the leading firms of America and Europe, and have never yet found one which did not have some more or less mixtures. Of course, among the most careful, the strays would be insignificant. Anything serious, of course, is corrected as soon as possible. This goes to show that very few of us are infallible. One of our

western growers was sick, and hired a man to plow out his plants, and he, like a "wild bull in a china shop," knocked down most of the stakes, so the plants had to be sold as a mixed lot.

The Proper Way

is to wait till the plants bloom before stock is put on the market, unless you have it from some reliable firm. If mistakes occur, rectify them as soon as possible. I find the best way is to have good, strong stakes, at least two feet tall, painted, with the bottoms dipped in coal tar.

CHAPTER X

Keeping the Paeonys Back in the Spring for Selling

We do not all of us have cold storage, and unless very cold, they will start, if kept moist, at a very low temperature. I have kept boxes of Paeonys frozen, and as soon as the frost was out they began growing. It will not do to leave them in the field if we expect to sell them, for buds grow rapidly and are very tender, and often orders come in when the plants are two feet tall. Of course it is not a good time to plant, yet customers want them as late as May, and are disappointed if they cannot get them.

It is very easy to keep them back. Instead of packing them in wet moss, which would bring them forward immediately, keep them cool and dry; even if wilted a little it will not hurt them. One spring I received a lot from France. They came late, and were packed dry in an open basket. They were badly wilted. Placing them in water a short time revived them. They lived and grew, and some of them bloomed the same season. Of course it is not necessary to keep them very dry. They can be placed on a rack, like cannas or dahlias.

Late Blooming

If you wish to continue the flowering season into July, take large roots with plenty of buds, and keep them partially dry, as noted above, or in cold storage, and plant out from the middle of May till the first of June. But there may be this trouble about July blooms. In Kansas and Nebraska the sun gets very hot, and delicate flowers might have the sun scald. I have seen this sometimes in the case of Madam Chaumy, which is a large, late and very beautiful flower; also with Richardson's Perfection. Where there is any danger, set up stakes and stretch gunny sacking over them. It is well to plant those for late flowering in groups, so they can be easily protected.

In Planting, the Condition of the Bud Must Be Taken Into Account

This is very important. The Paeony usually goes into a dormant condition about the middle of August. I have had excellent success in planting at that time, for the buds that form for the next spring are small and tough, and they can be handled without danger of injuring them. As a general thing, however, September is the best time, for if very hot in August it will not do to ship. If packed too moist they might rot. When planted at this time little rootlets begin to grow and the plant is all ready for its spring growth. You will notice that those left in the ground and apparently dormant are making a fine growth of fibrous rootlets, and the longer they are left the more numerous they will be. The buds are growing too, and often old roots will have a net of rootlets around them, and the buds will be much larger and more liable to damage than if planted earlier. Of course Paeonys can be planted any time from the first of September till the middle of the following May. But we are speaking of the BEST TIME. I have often planted strong, left over roots from the first to the middle of May, and if the ground is rich and in the best condition, have cut good crops of flowers from them a few weeks after planting.

There are various ways of lengthening the flowering season. A lady had occasion to dig a cellar, and eighteen inches of dirt were thrown over a strong clump. She supposed of course they were dead, but two weeks after the rest were up these came on, blooming so much later than the rest. It would not do to try this, save on strong, well established clumps. I have heard that mowing off the tops when they are a few inches high would retard them, but never wished to try it.

This plan works well: Suppose you have a row ten rods long. At one end you have no mulching; then you put on a little, increasing it till you put it on a foot deep at the farther end. The covering should be put on when the ground is frozen solid. You will note quite a difference in the same row in the time of blooming. On the other hand, up in Minnesota, some Paeonys that were not mulched were very late in coming up, after a severe winter. What was the trouble? One fall in that state I had occasion to dig up a large clump, to transplant for a friend. The previous winter had been bare of snow, and very cold. I found that the exposed buds had all been killed. But the plants would not give up. They had absolutely formed new buds, and of course that took time. Though as far north as Manitoba they come out all right with just a snow mulching, yet it is much safer to put on a covering, because some seasons the snow may be light. When I can do so I mulch in this latitude. It is not necessary for root protection, and yet a good coat of manure pays. Many are at the trouble of using liquid manure. But if you have plenty on the ground, every rain will do the work for you, and if it is dry, irrigation will serve the same purpose.

CHAPTER XI

Non-Blooming Paeonys

The following is such a characteristic letter that I insert it here. It is a sample of the scores of inquiries that come to me along the same line:

MR. HARRISON:—What is the matter with my Paeonys? They will not bloom. I surely paid enough for them, a dollar for six. I have had them five years, and only one bloom all this time, and that a little, inferior thing. I bought them for different kinds, but from the looks of the foliage I believe they are all one kind, and I guess they are afraid to bloom, because of the deception. The most aggravating thing is, my neighbor has some of the most beautiful ones I ever saw. They are loaded with the choicest flowers every season. I have had manure spaded around mine, and have mulched them in winter, with no result save great clumps of leaves. What shall I do, and what is the trouble?

ANSWER.

MY DEAR WOMAN:—I am afraid you have been patronizing the "bargain counter." If you paid only one dollar for six plants, you could not expect to get good ones. You have what you bought, a cheap lot. What will you do with them? Dig them up and throw them away. Be sure you dig deep enough to get out all the roots, so you will not hear from them again. You have probably been insisting that a "piny was a piny," and that was all there was of it. Now you see your mistake. There are thoroughbreds in flowers as well as in cattle. A $15 scrub cow bears no comparison with a choice, thoroughbred Jersey, which costs ten times as much.

Think what economy there would have been in starting right. Had you bought one glorious Festiva Maxima with your dollar you would have had blooms worth while, and fifteen or twenty good roots by this time. You might have bought the beautiful l' Esperence or Andre Laures for 50 cents each, and had early and late blooms, and a wholesale lot of them. Your experience was worth all you paid for your worthless roots, and remember there are many dealers who keep just that kind of stock for just such customers. It pays to get the best. We have several that cost $2.50 a root, wholesale, in England, and some that cost $5 a root. But it pays.

Is it not strange, that in fitting up a home, one is so lavish on the furnishings and so parsimonious on the outside adornment? I have known a man with large and beautiful grounds and a home that cost thousands, to throw up his hands in horror at having to pay $40 for choice trees, shrubs and flowers for the lawn. You build a costly house, and the moment you enter it, it begins to depreciate in value. You fill your yard with choice things, and they begin to increase. There is a gold mine there. Work it, and you will be rich in the beauty it gives. Don't be content with a single flower. Get masses of them. A lady came for some phloxes. She wanted three for her town home, and

three for the farm of 160 acres. Poor things! What a task those three flowers had in brightening a large farm. Three hundred would have been nearer the thing.

I look out on thousands of glorious columbines, mingling their beauty; hundreds of the oriental poppies, that blaze in their splendor; a host of gaillardias, that are always in bloom, from June till November; and there are 5,000 phloxes vieing with each other. Why not be generous with yourself out of doors as well as in the house? If you were furnishing a new home, you would not go to a second hand store and get old rag carpets because they were cheap, and rickety chairs and other furniture, with a lot of old bedsteads.

In fixing up your front yard, why not have the best, and plenty of it? A 25 cent Paeony does not match that fine parlor set, and a lone flower or two will look cheap compared with the $50 rug. It is much better to put less in the house, and more on the outside, where it will grow in value, while the house and everything in it begins to deteriorate as soon as you enter it.

CHAPTER XII

Cut Flowers

More and more choice flowers are growing in favor. It is amazing how great the demand is for roses, carnations, lilies and others. The Paeony stands among the best. Properly handled, it keeps a long time. They should be cut in the evening, just as the buds begin to open. Use a long stem. Strip off the lower leaves and put the stems in water over night. They absorb moisture enough to feed the flowers and keep them from wilting. These are carefully packed in a box and sent to their destination. If there are too many in the box and the flowers are wet they will heat in a few hours. In wet weather it is hard to get the remaining blooms and leaves dry enough to ship any distance. We have found the safest way is to put moss and oiled paper around bundles of twenty-five, packing them as carefully as possible, and leaving the box a little open. When the flowers reach their destination they are put in cold storage, where they are kept dormant till needed. White flowers are much used for weddings and funerals. When Mark Hanna's youngest daughter was married the house was most beautifully decorated with white Paeonys. There is a great difference in the keeping qualities of these flowers. The single ones are much admired while growing in the garden, but they are much more short-lived than the large double ones. Then there are some that grow old gracefully, like La Tulipe, Baroness and Festiva Maxima. Others are very dilapidated and ugly in their dotage. Richardson's Rubra Superba and Tecumseh are fine keepers. So is Grandiflora Rubra. The former can be kept in cold storage a long time.

Usually the first flowers of a plant are the best. If you wait for

some to bloom, and then cut the buds of those that follow, you do not get as good specimens. If you are shipping, watch them closely, and the first harvest will prove to be the best.

This is the most popular of all the flowers for Decoration Day. Some seasons they are then in their full glory. There is much call in our northern cities for those raised further south. In most of our northern states early bloomers can be secured. l' Esperence, a lovely, fragrant, French pink, is generally on time with great masses of bloom. Florists should especially draw the attention of their customers to these flowers for decoration, and create a demand by giving their names and characteristics. I know of one florist who secured a fine lot from Europe, but lost their names, and when he went to sell them he called them "pinys," which of course recalled the rank odors of childhood.

Let the florist keep the finest. What rose can put the Solftare to blush, or shame the Thorbeckii, with its cinnamon fragrance, its sumptuous beauty, grand in size with its rich coloring varnished into its petals?

Cutting from Newly Planted Roots

Where you have strong roots, planted in the fall in very rich ground, on some varieties there will be quite a crop of flowers. Some growers carefully nip off all the buds the first year, thinking it will exhaust the plant. Others will cut them close. We are to remember, however, that it is impossible for a plant to do its best the first season. It takes three and sometimes four years for some varieties to show what they can do. I often receive pitiful letters from ladies who are so disappointed that their Paeonys have not done better, when they had been planted but a few months. One lady, hearing this Manual was to be published, hastened to secure it in the hope that it would throw some light on her trouble. Inquiring what that was, she had planted some Paeonys a few months before and the foliage was not as rank, or the flowers as large as those of her neighbors. An excellent remedy in such cases is to wait.

CHAPTER XIII

Paeonys and Insects

It is said truly that these plants have the fewest insect enemies and diseases of any of our flowers. Yet complaints sometimes come in regarding ants. These often cover the bud, and sometimes, it is said, injure the flower. What is the reason for this. I once forced some Paeonys, and had a chance to watch them closely. I found the buds exuded small drops of purest honey. Tasting it, I could not tell the difference between it and the genuine article. After that I noted that ants and bees and all sweet-loving insects were very busy in blooming time.

ROSE PINK PAEONY. MADAM GEISSLER

By Kindness of W. A. Peterson

MARIE LAMOINE PLUTARCH LA TULIP

Perhaps it is not generally known that a field of Paeonys is one of the finest of all bee pastures, and for weeks the air is filled with the hum and buzz of honey gatherers. This honey is what the ants are after. They are in evidence mostly before the buds open. Sometimes they invade the flower for the nectar hidden there. The bee is busy then mixing the pollen, so that we can have a larger variety. One remedy is to have more flowers, so the insects will not concentrate on the lonely few. Those who grow them in quantities are never troubled. Another remedy is to put an old saucer at the base of your plant, with syrup mixed with a solution of arsenic. But as this is hardly fair for the bees, you had better try the first remedy.

Perhaps in time people will learn to plant in masses. Have a few choice ones, and then you can always get cheap ones that will flower, too, for $6 to $10 per hundred. Flowers need company. They are social things.

Diseases

While remarkable for its robustness and health, yet sometimes when it is very wet, the foliage will rust badly. This was the case in Nebraska in 1903. The remedy is to spray with Bordeaux Mixture. I did not do this. It is only a transient affair, and the next spring and summer I never saw more vigorous foliage.

Recently there has come to us an account of what is called the "drooping disease." A white mold forms on the diseased stem and clings to the root over winter. The remedy is to remove the stems and the earth and put fresh earth around the plant. Lime would probably be of assistance. We know nothing of this in the west.

The Five Points of Excellence

A first-class Paeony should be: First, symmetrical and beautiful in form; second, fragrant; third, a good keeper as a flower; fourth, a prolific and ready bloomer; fifth, the plant, to be profitable, must be vigorous, and propagate readily. We have many that score well on all these points.

Mission of the Tops

It is a wise provision of Nature that the tops should fall down and shelter the roots and buds in winter. They make a good covering in the absence of other mulching. If they grow in the open the snow naturally drifts in, detained by the fallen tops, and so you have a snow bank for additional protection, and also spring irrigation when the snow thaws. Yet in a visit to one of the finest Omaha cemeteries I found they mowed off the tops, to have the surface uniform, and to prevent the snow drifts, and the plants were blooming beautifully. This might do in our present cycle of wet seasons, but when years of consecutive drouth return, it would be better to leave the tops.

Freaks

Though generally sedate, yet this flower is sometimes erratic. I just received a severe censure from a man because his Rubra Triumphans, blooming a few months after planting, came single instead of double. He bought of me because he thought I would be reliable, and he didn't buy any single Paeonys, and wanted the wrong righted. Now this flower, as well as many others, is ambitious to show bloom as soon as possible, and not having strength to produce a great, double flower, gives a single one. Victoria Tricolor will bloom anyway. If the root is small and out but a few months it is bound to bloom. That seems to be its mission. But it always cuts the coat according to the cloth. If it has material to make a great, double flower, it will gladly make it. If, however, it is short of capital, it will do the best it can. Seedlings will often bloom single for years, and then turn double. We have the record of one that blossomed single for twenty years, and then bloomed double. It is not wise to discard seedlings till fully tested. Absolutely the finest crimson I ever saw was found in a lot of rejected seedlings. After a hard freeze in spring some flowers will refuse to bloom at all, and others, damaged in the bud, may have inferior blossoms. Others, like Floral Treasure, will do their very best after the worst abuse. Very often the last, out of season blooms, of our best double ones will be little, inferior, single flowers.

Do not sit in harsh judgment on flowers at their first blooming. You can tell little about them except their color. A white one should not be red or crimson. As to form and size, suspend judgment. There is such a confusion in names. You buy a genuine Humei, an M. Valliant and a Thorbeckii, and you have one and the same flower, yet one of our very finest. You get Bryant's Humei, Andre Laures, Fragrans, Fragrant Rose and Late Rose, and if you don't get the same thing every time, you come very near it, and all the parties honest in it, too. Our Paeony society is very busy getting the tangle out of all this confusion.

Will Anything Kill Paeonys?

They are called hardy as paving stones and as tough as Scotch thistles. Yes, it can be done if you know how. Plant them in low, wet ground, where the water can stand on them, and you will succeed. Put them in wet, undrained soil. Let the snow drift on them before the ground freezes, and then it can be done. I have known some in grass and weeds during three years of consecutive drouth to be absolutely dried out and killed. It has been done by driving over them or tramping on them till the earth is like a brick bat. But they will stand all that any plant can and offer patient and quiet resistance as long as possible, and let go of life reluctantly.

The spring of 1903 gave them the hardest test I ever knew, and showed the different degrees of hardiness. April had been prematurely warm. There was a prospect of very early blooming. The stocks were some of them two feet tall and the buds were swelling rapidly. Then on the night of the 29th, there came a genuine, wintry, sleet storm, and

the plants in that tender condition were frozen solid in a coat of ice for two days. When they thawed out they all looked tired, drooping and water soaked. But to our surprise a few days after they stood erect and went right on with their preparation for blooming as though nothing had happened. But I noticed that some varieties on low ground took such treatment to heart. After the freeze came floods. Fifteen inches of rain fell in May. Ground usually well drained became a quagmire. Some kinds could not endure it. The Duke of Wellington could survive Waterloo, but not such treatment. Why the name of a grim, old warrior should be given to such a flower I cannot understand. Little, delicate Purity was too tender for such a world. Drop White dropped white, and so did everything else. The loss was not heavy, just enough to show that they could be killed.

Right beside the tender ones were La Tulipe, Thorbeckii, Alexander Dumas, Model of Perfection, Baroness Schroder and fifty other sorts. The main plantation was in a rich, well-drained valley, but the railroad built a bridge, which proved to be a dam, and this gave way, flooding the field four feet deep. So you see what they had to go through. Sleet storm when near blooming, a flood and three terrible hail storms, and yet there was no loss of plants in that field, but a good crop of flowers.

A Good List for Beginners

We often receive letters asking for advice on the best kind to plant, something hardy and vigorous, that will increase rapidly and that will bloom freely. Victoria Tricolor, Reine Victoria, Victoria Modesta, Thorbeckii or Genuine Humei, l'Esperence, Edulis Superba, Rubra Triumphans, James Vick, Andre Laures, Late Rose, Grandiflora Alba, Compte de Nantuel. These should be had at quite reasonable rates; good, strong roots. One need not be entirely confined to this list. There may be an abundance of others as good.

What of the Future in Paeony Growing?

Evidently the cheaper sorts will remain at about the same price, for the number will be swelled by rejected new ones. The standard varieties will remain about as they are, with a slight advance. The new or rare sorts of especial merit will keep up at the present high rate, or even advance, for thousands of people will be found who will have the very best, and the high priced ones will be as sure an investment as a poor man can make. An invalid lady can engage with success in this industry. If you go into carnations or roses you will need costly green houses. If you wish to raise Paeonys, which will be just as profitable, the directions of this Manual will give you just as good a chance as the millionaire has. There is probably no industry so important and profitable that can be carried on with such little expense as this. You may be poor, with only a little home and a small garden. You have a baby girl, and you look forward to the time when she will enter on womanhood, and shudder as you think she will have nothing with which to begin life. Buy a genuine Baroness Schroder, or Lady Alexander Duff, or Marguerite Gerard; one

good, strong root, and let it grow, and take care of it. One thousand in ten years. How many in twenty years? A thousand multiplied by a thousand. You would in fifteen years have enough to retire on. This is not counting chickens before they are hatched. There are no broken or addled eggs among them, and they will grow for the poor man as well as the rich. "The business may be overdone in twenty years." Then all the flower business will be done for, and there will be no more call for carnations or roses. Festiva Maxima for more than half a century has been on the market, and the market is hungry yet, and will be. If you are a young man and have a little ground, and want to insure your life, buy a Paeony, the best you can hear of, or take what you would require for your first payment and purchase several, and they would take as good care of you as the insurance companies could. These companies live on lapses, and those securities don't lapse. Should you die, you are sure of what you paid in, with compound growth, which means compound interest.

The English say this is the flower for the "millions and the millionaire." I think they would grow better for the poor man than for the rich, for he would regard his bed of choice plants as his gold mine, and would take the best of care of it. It takes years to learn a trade and learn it well, a trade that will lay up money for old age. It takes a good deal of cash to go into business which will bring in adequate returns. But it takes but little time, or cash either, to get a few of these choice plants, and then love them and care for them. A little capital invested in this way can be kept sacred for the future, and insure comfort in old age. There are no doubtful and uncertain board of trade complications about the business. Set a little aside, and how much incidental enjoyment you would reap from it. Those worshipful flowers in queenly garments saluting you, and they are all your own, and their numbers increasing as the years go by; an income from the blossoms and a greater income in the way of princely enjoyment. And though poor and hard working, your flowers will treat you as well as if you were rolling in wealth, swelling with pride and riding in an automobile.

Confusion in Names

As we go to press complaints pour in about spurious kinds, under leading names. For instance, the Baroness Schroder, described in this Manual, is the correct one. A description was given it by the writer several years ago, and the whole available supply was bought up. We wrote to England for more, and none could be had. But the call was so great that the demand must be met, and so an English firm has been sending over three different kinds for them, just as they have been sending spurious kinds for Lady Alexander Duff.

One of our leading growers writes me that he has been importing from Holland, and the same plan prevails there. There is a great demand for fine leading sorts, and so the name will be attached to any kind and sent over. It takes a year or two to find out the mistake, and then the seller considers that the account has grown cold. These tricks will have the tendency to send guaranteed, genuine kinds, held by Amer-

ican growers, up soaring. A man would rather pay $5 for a certainty than five cents for some cheap affair.

CHAPTER XIV

Herbaceous Paeonys

Within the past ten years this magnificent section of hardy. herbaceous, flowering plants has been brought into very prominent notice because of the general improvement in varieties of comparatively recent origin. In these newer sorts the flowers have attained immense proportions, reaching in some instances the large size of seven to nine inches in diameter and five to six inches in depth. The range of color is also so varied that almost every tint of pink, white, red, crimson and even yellow is comprised in the list. The vigor and habit of the plants have been so improved that stems two and one-half to three feet in length, and sufficiently strong to properly support the immense blooms, are now grown. There is an element of practical, permanent value in the Paeony; that is, the plants once purchased and planted in suitable soil, continue to increase in size and profusion of bloom, and pay a generous annual dividend in the way of an enormous crop of magnificent, deliciously fragrant blooms that are unsurpassed for decorative purposes. During the past season the popular use of Paeonys for decorative purposes is amply evidenced by the greatly increasing sale of the cut blooms in the large cities, where thousands of splendid flowers found ready market at handsome prices. This increased demand may be accounted for by the introduction of the more recent varieties, which are wonderful improvements over the older sorts. The popular interest in the Paeony will receive an additional impetus from the organization of the American Paeony Society, which comprises within its membership the majority of the largest commercial Paeony growers, as well as many amateurs. The interest in the Paeony is not, however, confined to the special society above mentioned, as the Society of American Florists has recognized its importance by the appointment of a Paeony committee, for the purpose of gathering and collating information concerning it. The joint efforts of these two florists' societies presage such an active presentation of its merits as will result in an increased knowledge of its value and in largely augmenting its use.—C. W. Ward, President of American Paeony Society.

It is surprising that so noble a flower, almost rivaling the rose in brilliancy of color and perfection of bloom, and the Rhododendron in stately growth, should be so neglected. Amateurs seem to have lost sight of the many improved varieties introduced within the last few years, and our finest gardens, perfect in other respects, are singularly deficient in

specimens of the newer kinds. The first point in their favor is hardiness. It may be truly said of them that they are "hardy as an oak." In the severest climate the plants require no other protection than that which they afford themselves. Then their vigorous habit and healthy growth, freedom from all diseases and insects, are important arguments in favor of their cultivation. Growers of roses know well that their flowers are obtained by great vigilance and care. Not so with the Paeony, which, when once planted, all is done. Each succeeding year adds to their size and beauty. The foliage is rich and glossy and of a beautiful, deep green color, thus rendering the plants very ornamental even when out of flower. The newer varieties produce very large, handsome, regularly formed cupped blossoms resembling large roses. No other flower is so well adapted for large, showy bouquets. The Paeony may be planted either singly on the lawn or in borders. Where the lawn is extensive a large bed makes a grand show, surpassing a bed of Rhododendrons. It is really a flower for the million. They blossom early in June. Our collection has been made with great care and includes the best and most distinct varieties.—Ellwanger & Barry, Rochester, N. Y.

Herbaceous and Tree Paeonys

Very few of us who are along in years but can well remember the old red Paeony of our childhood. Paeonia Officinalis Rubra was probably brought by the earlier settlers from England and planted in nearly every country dooryard and garden. It is often seen now in the eastern states, growing within a few feet of the houses, and its first double, rich crimson flowers are as much a delight to the youthful members of the family as they were centuries ago. Later on double white and other varieties were introduced, but it was not till within the memory of this generation that new varieties had increased by the score and hundred. . . The varieties of the Herbaceous Paeony have of late years been immensely improved, till one European nurseryman catalogues about 800 varieties. We have now all shades of color, from the most intense violet purple to the purest white, from the size and shape of the half-opened Jacqueminot rose to that of an immense water lily some seven or eight inches in diameter. In many we have the most delicate and delightful perfume, while none are in any way disagreeable. We have single as well as double varieties, and the season of blooming, from the earliest to the latest, extends over five or six weeks. The single varieties are just as hardy as the double, generally among the earliest, and are very beautiful in a cut state. . . . . Of the many enthusiastic cultivators of the Paeony in France, Germany and England, perhaps no one did more to bring this valuable plant to the notice and appreciation of the public than the late James Kelway, of Langport, England. With his son William, after collecting the best varieties obtainable, he commenced a regular system of hybridization and of raising new varieties from seeds. Many of these seedlings in beauty of form, sweetness of perfume and delicacy of coloring, are close rivals of the rose, the orchid and the water lily.—T. C. Thurlow, in The American Florist, who sold his collection a few years ago for $7,000.

The Herbaceous Paeony of To-day

The development and increase of popularity of the Paeony have been unparalleled among flowers. Fifty years ago the development had begun, but the results of the experimenters were known to but few people comparatively. In 1855 only twenty-four varieties were known in England, although nearly two hundred were known on the continent. There are now in the market probably 1,500 sorts, which have originated in Japan, France, Holland, England and this country. The public has been quick to note the improvements and appreciate them, until now no flower is more popular than the Paeony in June. Paeonys range in color from purest white through the various shades of pink, lilac, rose and red, to the deepest blood red and purplish carmine in every possible combination of shade, form and size. Many are delightfully fragrant. Paeonys, like most tuberous plants, when dormant, stand considerable exposure, and can be shipped long distances with safety. They are never attacked by any insect, animal or fungal disease, nor do the plants require any covering during the severest weather; in fact, they are among the most hardy, showy and easily grown of all the garden flowers. — W. A. Peterson, of Chicago, one of the most extensive growers, and one of the directors of the Paeony Society.

Culture

Paeonys will thrive in all kinds of soil, but do best in a deep, rich loam. They are gross feeders and demand a great quantity of water during the blooming season. If grown in partial shade, the blooms will last longer and be just as large and fine in every other way. They should be planted with the eyes two inches below the surface, and the ground pressed firmly about the roots. Though Paeonys may be safely transplanted in the spring, the best time is early in the fall, beginning September 1st. There is then the least shock to the roots and the least danger of losing a year's blooms.—W. A. Peterson.

The Paeony Root

Is a fusiform or spindle-shaped affair, hard and fleshy, in appearance between a Dahlia and Rhubarb root; which fact, and the store of juices contained in a well-matured piece, explains why Paeonys will travel so safely and well to distant lands. Paeonys, however small the plant, as long as there is an eye, will grow; it is difficult to kill them; but they are impatient of removal, and should be left in situ until their full glory has made itself apparent—and afterwards. They may be watered as much as desired, either with pure water or liquid manure, and will delight in the luxury and repay the cultivator by the increased size and rich coloring of the flowers; watering is not absolutely necessary, but is very beneficial, and in very shallow soils should certainly not be omitted. A mulch or a covering of manure or leaf litter, etc., is also to be recommended; it will keep the ground moist in hot weather. The

further apart—in reason—that Paeonys are planted the better; individual success governs the effect as a whole; but a good way for quick effect in beds, etc., is to plant about 18 inches apart, and to move every alternate plant either the first or second year; for 3 to 4 feet is not too much between Paeonys which are eventually to become large clumps.—Kelway.

Plants to Grow with Paeonys

Many things can be planted actually between and amongst Paeonys, many bulbs and dwarf Alpines, and, of course, in beds and borders Paeonys plant well alternately with such subjects as Delphiniums, Gaillardias, Hardy Lobelias, Michaelmas Daises, etc., or in front of tall growing subjects. Some of our customers are making interesting experiments as to suitable companions for them. Gladioli, flowering when the Paeonys are long past, Narcissi and Scillas, are among the most admirable of consorts for them; and Shakespeare himself must have noticed the suitability of the lily, for he speaks of "Thy banks with paeonied and lilied brim" in the "Tempest." We have referred to the beauty of the foliage of the Herbaceous Paeony; this should be left on the plants as long as it is an ornament, unless it is required for the house, and only be removed when dark decay has made headway. —Kelway.

Tributes from the Press

A Gorgeous Gift.—Business was suspended in the office of the Northwestern Agriculturist for some time last week, while the employes revelled in the huge box of Paeony blooms sent us by C. S. Harrison, of York, Neb. Mr. Harrison is a Paeony enthusiast, and now has on his place some 40,000 Paeonys in bloom, including 400 varieties. Such a mass of flowers must seem like a sunset smashed to flinders and wrecked on the ground. Even a two-bushel box of the gorgeous blossoms caused one lady to exclaim in rapture, "Well, the good Lord did make this beautiful world, indeed."

Paeony Perfume.—The time for Paeony planting is now here. They are very sweetly scented, some being redolent of purest attar of roses, and others sweet and tonic at the same time, like violets and chrysanthemums in combination. Messrs. Kelway sent me a box of blooms last spring, and I can truthfully tell you that I never saw such fine flowers in my life. I filled a bow pot with them, and wasted all my time in loafing round that beautiful bunch of Paeonys what time it lasted fresh —about ten or twelve days.—Hearth and Home.

Fragrance of Paeonys.—It is not customary to class the Herbaceous Paeony among sweet-scented flowers, but many of the varieties are very much more fragrant than some roses and carnations. Some are quite delicately perfumed, and it is curious that some of them almost exactly mimic the queen of flowers in this respect. I gathered lately a bloom from a light pink variety, the name of which I did not know, and

Paeony Land of Jas, Kelway & Son, Langport, England

JUNO BELLE OF YORK GEN. LAWTON

CORONATION GENERAL GRANT

the odor was so much like that of Gloire de Dijon Rose that with closed eyes it was almost impossible to detect the difference. I think it doubtful if the fragrance of this extremely showy and very hardy plant is generally appreciated.—The Garden.

Boston Record's Account of a Great Paeony Show

Paeonys Attract Flower Lovers to Horticultural Hall To-Day.—Paeonys to-day claim the admiration of the public at Horticultural Hall. The place is ablaze with the gorgeous coloring of these blossoms, which seem to have reached the full extent of perfection and variety. The public thronged the place at the noon hour. Slowly one old woman climbed the long front stair. She held by the hand a chubby child who took two steps to her one. As she reached the top and looked in at the door she took a long breath with satisfaction, and said, "That's just the way my grandma's garden smelt when I was a little girl like you." As she passed in the hall and slowly walked around the tables, she exclaimed, "Well, I never! Do you see those single Paeonys? I never saw one of those before. They look like immense single roses." Those single Paeonys, blushing pink with hearts of gold, are something entirely new, and belong to T. C. Thurlow, of West Newbury. He is one of the largest exhibitors in the country, and has some superb flowers. Most of his flowers were from roots that came from England, and they were the finest ever exhibited. He showed some perfect white varieties, some wonderful double ones that looked more like chrysanthemums than anything else.

Paeonys for Color Effect.—The "wealth of globed Paeonys" has during the present month produced such a glorious display of color in gardens in which the varieties belonging to the herbaceous section are adequately represented as to prove to demonstration their great value in bold grouping, and to suggest that with their aid many gardens might be made more beautiful in "leafy June" than is possible under existing conditions. Their bold, spreading leafage and massive flowers render them especially useful in the creation of striking color effects, and these characteristics in conjunction with their resplendent hues remove them so far from other hardy plants flowering in June that to institute comparison would serve no useful purpose. The descendants of Paeony Albiflora, which have for upwards of 300 years occupied a prominent position in English gardens, form a group perfectly distinct from all other plants of their season, and combine effectiveness and beauty in an eminent degree. The range of color that has been obtained, as one of the results of the long-continued efforts of the several raisers, is very wide, being bounded on one side by the snowy whiteness of the flowers of the elegant P. Whitleyi, and the rich sanguineous crimson of that old favorite, P. Officinalis. Between these points there is a multiplicity of shades, which in some instances so closely approach each other as to render it no easy task to distinguish them. The diversity in the form of the flowers is not less remarkable than is the range of coloring; not only are there single, double, and anemone-like flowers, but the blooms of many of the varieties in each section differ materially from each other, and add greatly to

the charm a representative collection is so well able to give to the garden. Arranged in groups, each consisting of one variety; in the herbaceous border; and in beds on the grass in the less-frequented parts of the pleasure grounds, they are singularly effective, but in no part of the garden do they appear to greater advantage than when planted in masses in the shrubbery border. The shrubs not only form an excellent background to the brilliant colors, but they shelter the flowers from storms of wind and rain, and thereby in many seasons greatly prolong their beauty, more particularly in the case of the singles. The value of the Herbaceous Paeonys is not limited to their attractiveness in the garden; their flowers are exceedingly useful for indoor decorations, especially on festive occasions, when bold grouping and the association of plants and cut flowers are desirable.—The Gardeners' Magazine.

The Paeony as Seen by an Amateur

In the acquisition and culture of the newer varieties of Paeonys, the amateur has a great pleasure in store. Few of those who find the solace of their leisure hours in floriculture have any conception of the improvement which has been made in the Paeony. They are all accustomed to the sturdy plants, which, resisting exposure, neglect and ill usage, stood in the old fashioned garden, flaunting each spring their blossoms of white, red and pink. Grand old plants these were, and worthy progenitors of the exquisite creations of the modern hybridist, which are now first offered to flower lovers; but the Paeony lover of a generation ago would hardly recognize his favorite flower in the gorgeous blooms he will see at the coming exhibition of the American Paeony Society. The most vivid crimsons, the most satiny pinks, the most creamy whites, will feast his eye in every gradation of shade and every variation of form and shape that Nature, with her wealth of ingenuity, can devise.

But to meet the wants of the amateur, beauty of form and color is not enough. These are often secured by care, skill and appliances which are entirely beyond the reach of the ordinary person. The amateur needs a plant whose culture is simple and whose needs he can supply, and the Paeony in these respects is the typical flower for him. In his garden and with his own hands he can produce as fine blossoms as the expert who originated and produced the variety. Given a good, ordinary soil, well fertilized with a shovelful of old manure, and a few months' healthy exercise, and the amateur, in his limited space and with his limited means and appliances, can set and start a plant which will each year increase in size and beauty. I will say of the Paeony that I believe it will be for the next decade the most planted and most popular hardy flower.

Go to the coming exhibition, Mr. Amateur. See the flowers, buy the roots and plant them, and see for yourself if my encomiums are not warranted.—Frank B. Lown, in American Gardening.

The Paeony as a Decorative Flower

The flowers should be cut with stems as long as possible, and the

stems put in water in a cool cellar or ice box for ten or twelve hours before being used. For decorative work I prefer the single or semi-double varieties of Herbaceous Paeonys. For large work, the Tree or Moutan Paeony is very stunning.

Last June we decorated a reception room entirely with Paeonys. We covered the entire ceilings and walls with strands of wire and hung the small, single Japanese varieties irregularly over the entire ceiling. By this I mean that some of the flowers hung six to twelve inches lower than others, giving a shower effect. The sides of the room were done in panels of the larger semi-double varieties on a background of asparagus plumosus. The reception was at noon, and the following morning, when the decorations were taken down, the Paeonys were in fairly good condition, proving that under proper treatment the Paeony has lasting qualities as a decorative flower.

As a cut flower on the breakfast, lunch or dinner table, we use one color suitable to the room and the buyer, and only one variety, if we have enough of it.

Some three years ago I used some fifty Tree Paeonys in pots in a decoration. They were very much admired and it was a profitable investment, as I am still reaping the benefit of it, proving that the public has only to see to buy.—J. H. Troy, in American Gardening.

The following regarding Mr. W. A. Peterson's Paeonys is from The Weekly Florists' Review: Although

the blooms are seven inches in diameter, when fully developed, and about five inches deep.

The sale of plants and cut flowers has increased wonderfully in the last few years, the Paeony enjoying an era of popularity heretofore unknown to this flower. Of course large numbers of plants are moved in the spring, but growers agree that it is very much to be desired that planting be done in the fall, and Mr. Peterson recommends that all planting be done in September. He says the plants divided and reset at that time will make one-third more growth the next season than if planted so late that root action does not begin before frost. He thinks this is a great drawback to European importations, as most of them arrive so late that it is impossible to get them started well the same season, and it takes two years to find out what they really can do.

Certain complaints about the failure of plants to bloom satisfactorily have led Mr. Peterson to make some experiments which have convinced him that the seed follicles should be removed from the plants after the bloom has passed. Do not let them stay on and wither, or it will cut down the amount of bloom the following season. This has been shown by careful tests with plants growing side by side.

CHAPTER XV

How John Went to College

Twelve years ago a family by the name of Skeels was living on a broad, bleak prairie, fifty miles or so west of Yankton. There were four children; the oldest was John. He was a noble fellow, full of push and vim, and very ambitious. He was a good scholar and soon got as far as he could in the common school. His dream day and night was to go to Yankton college. He had heard the president speak, and he became inspired with the idea of a full course. He had no great desire for any profession. He thought there was no calling on earth as noble as farming, and he wanted a place at the top. How to secure the means was the question. He talked it over with father and mother, and there seemed to be no way out. The house was small, and there was a mortgage on the farm, and wheat raising was uncertain. Some years there would be a drouth or a flood, and a whole year wasted.

"Well, let me buy a heifer and raise stock from her."

"She would eat us out of the farm with her numerous progeny in ten years, and you would have so much to do you couldn't help me. You are my main dependence, and I cannot mortgage my farm to a herd of cattle."

"Let me buy a pig, then."

"Well, there is the same objection. You might get fifty pigs and fatten them and they would drain the farm, and when ready for market all might die of cholera."

Johnnie saw the point, for one of the neighbors had met with a fearful loss, and he saw fifty dead at one time.

About this time the mother visited the east, and on Decoration Day

252973

Can we sell cut flowers?"

"Yes, as soon as you have enough to pay. Yankton will need some, and often they will bloom for Decoration Day, when there is always a great call for them."

"What will the roots cost?"

"About fifty cents each for the finer grade. We have cheaper ones, but these would give the best of satisfaction I have some that cost me $2.50 a root in England, and though it pays me, I would advise you to take these at a more moderate price."

"This," says she, "solves a great problem. They will not eat a farm up. They require but little room. A boy can care for them. I saved $5.00 to buy a dress with. I will take ten roots of Paeonys and pay you now, and send them next spring."

"No, I will send them in September. You plant them then, and water thoroughly, if it is dry. Plant about two inches below the surface, and in your cold country throw about four inches of coarse manure over them just as the ground freezes You plant a Paeony in September, and if you should take it up in November you would be amazed at the growth of small roots all ready for a grand push in the spring. Get some hen manure, a wheelbarrow load. Have it well mixed with the soil and spaded two feet deep. Keep the ground wet, so that fertilizing will be well incorporated by fall, for it might burn the roots to have it near them in a raw state. We will send you ten roots by express."

When Mrs. Skeels went home she told what she had done, and unfolded her plan. She told how those flowers were healthy and had no disease or insect enemies, how fast they would probably increase; and all went into the plans with great zest. You may believe that little plat

of ground was well cared for, and if the parents had not restrained them there would have been a wagon load of fertilizer gathered. But Johnnie was persuaded not to kill his friends with kindness. I would say here that this preparation is not always necessary. Other manure will answer.

Next year there were flowers. Did you ever see such happy children? The love of the beautiful which had lain in bud in their souls, burst out in full bloom, like those glorious flowers, and no one supposed before there could be so much delight in so small a piece of ground. That ground became a sacred spot. Not a weed was allowed to grow, and in dry weather was floode l with water. In the spring of the second summer John commenced preparations for September planting. He was curious to know how many he would get. The florist said he got five from a root. Could he do as well? In September he asked his father to dig up and count the roots, and there were fully fifty of them, besides several roots without heads that fell off, and small buds without roots. They had heard that even these buds would live. So they were planted, and sure enough they came up, and in time made strong roots. The headless roots were put thick in a pit, four inches below the surface, tops up, and the next year many or these had formed heads, and they were planted out. Some took two years to form buds, and some never came to a head.

The next spring a rather presuming neighbor came and said, "I want to get a lot of your piny roots to plant out; I hear you have a lot of them."

Johnnie said, "We have none to sell."

"Well, I didn't expect to buy. My mother used to give them away," and away she went off in a huff, feathers all ruffled.

"As well ask us to give her a pig or a calf," said John. "Not much. We will not cheapen our treasures by giving them away."

At the same time he determined, when he had a stock, to give one now and then to some poor mother, whose soul was sick with longing for the beautiful, or some sickly girl, who would revel in the delight of one of these flowers. But he preferred to send flowers rather than roots.

The fourth year there were 250, and two years after there were 1,250. Then John concluded he could spare a few, so as to go to the academy. He sold them for what he paid, fifty cents each. And people seeing them were delighted with the chance to buy. This was not all. John's Paeony garden became a Mecca for the lovers of the beautiful. Some people drove twenty miles to see them, and there were excursions from neighboring towns. Orders came in so that the boy's stock was threatened. He saw and got some other kinds, the splendid Humei, a great ball of beauty, with cinnamon-like fragrance, and satiny pink.

Suffice it to say John graduated, and commencement was made glorious by the display of a load of those splendid flowers, and the eyes of hundreds were opened to the possibilities of beauty on the bleak prairies of Dakota. Mrs. Skeels' five dollars brought forth a thousand fold.

To John came the possibilities of a piece of Dakota land. He bought forty acres. That was enough, and he soon had an income much larger than many got from 160 acres. Besides he was a preacher of the evangel of beauty. He found what trees and shrubs would grow, and his place is an up-to-date, earthly paradise.

Yes, this story has a foundation in fact—a fact which can adorn the

Dakota home with loveliness, and make the farm so attractive that boys will love farming, and girls will feel that there is no other place so desirable as a home in the country, and people from the crowded cities, seeing how lovely the farm can be made, will gladly leave their dingy homes for the pure air, the beautiful scenery, the health, comfort and joy of the model country home.

CHAPTER XVI

The Best Collections

We have written to leading growers regarding their choice for the best twenty-five. Tastes differ. So do soil and climatic conditions. Therefore we cannot expect uniformity.

KELWAY'S SELECTION, ENGLAND.

THE BEST SIX DOUBLES.—Lady Alexandra Duff, Kelway's Queen, Agnes Mary Kelway, Maria Kelway, Moonbeam, Joan Seaton.

THE BEST SIX SINGLES.—Viscount Cross, Duchess of Sutherland, Stanley, Bridesmaid, Lady Lilian Ogle, Emily.

THE BEST TWELVE PAEONYS.—The six doubles recommended, and Lady Bramwell, Dr. Bonavia, Mrs Stubbs, Bridesmaid, single; Stanley, single; Duchess of Sutherland, single.

THE BEST TWENTY-FIVE PAEONYS.—The above twelve, and Viscount Cross, single; Lady Lilian Ogle, single; Glory of Somerset, Duke of Cambridge, Lady Beresford, Duke of Clarence, Sir T. J. Lipton, Limosel, Prince George, Duke of Devonshire; Dorothy and Hesperus, singles; Lord Rosebery.

LIST OF C. BETSCHER, OHIO.

White—Off. Alba Plena, the true white, a pure white; Festiva Maxima, Marie Lemoine—Calots'; Alice De Julncourt XX, Diamond, Alba Superba, Mt. Blanc, Marie Lemoine—Crousse'.

Pinks—Off. Rosea Superba, Floral Treasure, Jennie Lind, l'Esperence, B. D. Champs, Grandiflora, Model of Perfection, Humei, Dorchester, Mary Hamilton.

Off. Rubra, Tenuifolia D., Rubra Triumphans, F. Ortegal, Warwick, Bacillus, Grandiflora Rubra, Rubra Superba, M. Mac Mahon.

LIST OF T. C. THURLOW, MASSACHUSETTS.

Artemise, Agnes Mary Kelway, Bridesmaid, Plutarch, Festiva Maxima, Brennus, Jeanne d'Arc, Lady Bramwell, Baroness Schroder, Pearl, Eduard Andre, Perfection, Madame Chaumy, Venus, J. Discaisne, Henri Demay, Rubra Superba, Louis Van Houtte, Thurlow's Double Rose, Queen Victoria, Francois Ortegal, Lamartine, Gloire de Chenonceaux, Grandiflora, Princess Beatrice, Helena.

ORIENTAL POPPY

A Perennial, with roots like a small Parsnip. Flowers of dazzling flame like color. Often Seven inches accross

MY OWN LIST, NEBRASKA

(As I have watched them for several years.)

Baroness Schroder, Festiva Maxima, La Tulipe, Golden Harvest, Sunbeam, Grizzel Muir, Excelsior, Terry's Carnation, Etta, Crimson Queen, Golden Wedding, Grover Cleveland, Duke of Dorchester, Clara Barton, Richardson's Rubra, Grandiflora, Ville d' Nancey, Red Jacket, Floral Treasure, Grandiflora Rosea, Genuine Humei, Lady Bramwell, Model d' Perfection, Alexander Dumas, Victor.

H. A. TERRY'S LIST, IOWA.

Festiva Maxima, Grover Cleveland, Commodore Dewey, Crown Jewell, Reine des Francais, Louis Van Houtte, Queen Victoria, Ella Adams, General Grant, Clara Barton, Crimson Queen, Excelsior, Belle Hough, Esther, Mrs. Rudd, Alice Roosevelt, Admiral Schley, Pottsii, Mrs. Pleas, Princeps, Sada Evans, Edulis Superba, Myrtle, Congress, Humeii.

These lists show some difference of opinion, and also the fact that the growers are not all confined to the same varieties.

CHAPTER XVII

A List of Some of the Leading Sorts

In giving this list we have aimed to give some out of the 2,000 named, so the reader can have an idea of the marvelous variety in this great family. The fragrant ones have not all been marked fragrant. We have not always given the names of the originators. Most of these we have tested ourselves; others we have taken from leading French, English and American catalogues.

It may not be satisfactory to the connoiseur—probably will not. The idea of this Manual is to introduce this flower to the masses.

I confess we have given some prominence to western productions, because their merits have not hitherto been brought to light. Raising them for years, side by side with imported ones, we feel they should have a fuller recognition. All honor to Father Terry, now 78 years old, who, in a quiet, patient way, for over 30 years, has been hard at work, giving us the best results of his persistence and skill, from which, as yet, he has reaped but little benefit.

Description of Over 200 Choice Kinds

Admiral Dewey. Guard petals deep rose, with center of pink and cream.

Alice. Blush rose, changing to white, center with straw shading; fine flower.

Agnese Mary Kelway. Guard petals of light rose, yellow petaloids,

with rose tuft. With me this is a lovely flower, though a shy bloomer.

Alexander Dumas. Mixed pink, double center, very double, quite fragrant. This is every way satisfactory, scoring the five points, a prodigal bloomer, extremely vigorous and hardy.

Alice Crousse. Shaded pink, quilled center.

Arsene Meuret. Deep pink, mixed with yellow stamens, free bloomer: often many on a stem.

Alexandriana. Light pink, solid color, silver edges, early and very fragrant.

Augusta Miellez. Guard petals pink, lemon center, early and fragrant.

Ambroise Verschaffelt. A rose.

Astrosanguinea. Dark red, tingedwith violet.

Artemise. Beautiful rose, of many tints.

Albaflora Plena. (Edulis Plena) white.

Anne Askew. Flesh colored, with narrow sulphur thread-like central petals.

Baroness Schroder. In England this is called flesh-colored; in Massachusetts it is sometimes grayish white; in Nebraska it is the purest, softest white. In the central petals there is the faintest lingering of golden tints. It is as sweet as the rose, and in form and grace of outline surpasses any of the rose family. Withal, it is so fluffy, sprite-like and ethereal, it seems as if it might float away. It is vigorous, and a ready bloomer. After it had grown two years I cut one root into eight, and six of these bloomed the next spring. They are very scarce, and spurious kinds are put on the market. This exquisitely beautiful flower scores the five points easily.

Beauty's Queen. Is a large white; outer petals blush rose.

Bunch of Perfume. Full double, vivid rose, very sweetly scented. This does not do as well in the west, probably, as in England.

Bioni. Guard petals light blush, with thread-like petals; not as vigorous as we could wish, though a lovely flower.

Bicolor. Outer petals white, with rose tinge; cream center, fringed; crimson blotch on center petals.

Beaute Francaise. Delicate pink, tipped blush white, full double.

Belle Hough. Large flower, light crimson, late and fine.

Bertha. Brilliant crimson, full double and late; a very satisfactory flower.

Bell of Crescent. Bright rose, free bloomer, large double, very showy.

Belle of York. Large, flesh-colored, a strong, robust flower, new.

Baron James de Rothschild. Semi-double pink.

Bridesmaid. Fine, semi-double, fragrant, white.

Barrymoor. One of Kelway's latest, cherry red and very handsome.

Bayard. Beautiful, clear, bright violet.

Blushing Maid. One of Rosenfeld's latest, fine blush and sweetly perfumed; not yet fully tested.

Coronation. A very large, handsome flower, light pink at the edges, the remainder a creamy flesh tint of a very delicate shade. The center is chalice shaped, with golden anthers at the bottom of the cup.

Carnation. Bright crimson outside petals, broad inside finely fringed, very fine. Grand, late bloomer. Very striking in appearance.

Clara Barton. This is one of the earliest. It is of purest white, like the spirit of its namesake. Its petals are delicate and almost transparent in their tissue-like form, not quite full double, but exceedingly attractive.

Crimson Queen. Both petals and petaloids are of the same deep color. It is finely fringed, but the whole flower is of that solid, intense coloring.

Commodore Dewey. Is deep, dark rose, of intense color. It is a large and attractive flower, one of our finest new ones.

Col. Wilder. Is bright rose, very double, blooming in clusters.

Charles Verdier. Lilac carmine. Transparent, slate color reflections. A large flower.

Compte de Paris. A vigorous and imposing plant. Flower on strong stem. Guard petals pink. Yellow center. A mingling of pink, cream and gold with a dash of red.

Charlemagne. Very large flowers, double flesh, white center, tinted lilac and chamoise. This does not always sustain its reputation, being apparently sensitive to soil and climate.

Cornucopia. Large and delicate, shaded pink, with a few golden stamens mixed. Sometimes five blooms on a stock at once. Tall and free bloomer.

Compte de Nantuil. Blush white, center tinged yellow. Having tested this for years I can commend it for beauty of bloom and vigor of plant.

Chrysanthemefolia. Rosy white guards, with a delicate chrysanthemum folded in the center.

Comptesse de Montalivet. Flesh, fading to white. Fragrant.

Cardinal Richelieu. Solid red, no stamens, large guard, very fragrant.

Carnea Elegans. Large, variegated pink, rather light color, with rose guard petals. A strong plant.

Duke of Devonshire. A very large flower of striking appearance, crimson in color, with satiny finish. One of Kelway's best.

Dean Hole. A very sweetly scented variety of a very bright and clear salmon rose color. New.

Duc de Wellington. Soft white, with pale, creamy white center. Very lovely, fine form. Plant not strong and vigorous.

Delacheii. Fine, dark crimsom.

Drop White. Pure white, splashed with crimson, fragrant and full double.

Daubenton. Purplish, lilac rose. Silver reflections, tufted center.

Duchess of Orleans. Pale rose, with salmon center.

Defiance. Brilliant crimson, tall and fine. Single.

Dr. Lindley. Large flower, tall and strong. Dark crimson.

Ella Adams. Light crimson. Very attractive.

Etta. Bright, satiny, light rose. Strong grower, late bloomer.

Euphemia. Flesh, colored with crimson blotches.

Excelsior. Dark crimson, large, fine, symmetrical flower, very striking in appearance.

Esther. Outside petals deep rose, inside white, rose tinted, a full bloomer.

Edulis Superba. One of the standard varieties. Shell pink, large, well formed, fragrant flower, and a very rapid multiplier.

Emperor of Russia. A magnificent, deep crimson. Very handsome.

Edulis Plena, or Albiflora Plena. White.

Eclatante. Is deep rose.

Fragrans. There are three that bear this name, one named by Kelway, a light purple; another is solid pink, with rather full petaloids, all the same color, and yet another, which is the late rose Paeony, nearly, if not quite, identical with Andre Laures.

Francoise Ortegal. A striking French crimson. One of the popular old sorts.

Fulgida Is another purplish crimson.

Formosa Alba. White, with cream center. Very fragrant, and one of our fine ones.

Faust. Is rosy white, large and full double. An exceedingly attractive flower.

Festiva Maxima. Is the queen of all. Almost without exception it is placed at the head of the list. It has every point of excellence. The plant is one of the most robust. You can usually tell the genuine by the shape of the large leaves. This, we understand, was introduced from Belgium in 1835, and all this time it has been propagated, and it is impossible to supply the demand. The Joliet Paeony farm, one of the largest in the world, wholesales them at $1.00 each, or $60 per 100. I am informed that the flowers bring $2.00 per dozen, wholesale, in Chicago. The flower combines great size with wondrous beauty. I have raised them seven inches across, a glorious form of purest white, flecked here and there with crimson, which seems to bring out the white in clearer relief. This flower seems to have reached the ultimate, beyond which we cannot go. It is so full double it seldom, if ever, produces seed. Nature all along the line seems intent on reproduction, but in a case like this she seems to say, "I can go no further." This is a good pattern to work by. Feed this grand flower. Let it do its best. And the resplendent form of beauty seems to say, "Beat this if you can." Men have tried for seventy years, yet we will keep on trying.

Festiva. Is fragrant, pure white, globular in form. A beautiful flower.

Floral Treasure. This is one of Rosenfield's, and it reveals the fact that we need not always go to Europe for choice ones. It was first put on the market for $12.00 per 100, but as soon as people found out its merits it shot up to $50.00 per 100, and the supply was short. It is a splendid hemisphere of fragrant loveliness, a good keeper, and has a long, strong stem to uphold the splendid bloom, which will sometimes be nearly seven inches across.

Fairy Queen. Is one of Terry's. Outside petals broad, inside fringed, full double, large flower, regarded by Mr. Terry as one of his best.

Felix Crousse. Enormous, perfect flower. A brilliant and dazzling red.

Grandure. A very fine, large, semi-double lilac rose, fragrant. We have had this several years. It has peculiar tints and shadings, which add materially to the attractions of a general collection.

Grizzel Muir. This is among Kelway's best. Pure white, good form and very fragrant. We are well pleased with it.

Geraldine. Described as lovely flower. Composed of one shell-like outer row of petals of pretty pink surrounding short, yellow central filaments, the pink forming a charming setting for the creamy yellow center. Sweetly perfumed.

Glory of Somerset. Soft pink, large and beautiful, also very fragrant.

Grandiflora Nivea Plena. Opens flesh colored, fading to white. A splendid flower.

Grandiflora. There are several wearing this name, of different colors. The most striking among them is a late, immense, full double flower, blush in color, very solid and compact, with a stem not strong enough to hold the immense weight of beauty. These should be planted in a mass and should be sheltered with a screen from the burning sun. This is probably one of Richardson's.

Glori de Doual. Deep crimson, semi-double.

General Jacqueminot. Color like the Jack Rose. Large flower, fragrant and a good keeper.

General Grant. One of Terry's fine ones. An immense flower of dazzling red. The only trouble is it does not furnish stem strong enough for the flower.

General Sherman. Another of Terry's. A strong, vigorous grower, rose color, tinged with purple. Late bloomer.

Grover Cleveland (Tecumseh). This is another of Terry's. It is a little freaky. One year it was described as follows: "It is a system of deep colored, rich flowers, packed and pressed together into a shapely ball of dazzling red, the solidest of all. You could almost stone a dog with it. It is one of the best keepers we have." Cut while the bud is opening, it retains its beauty a long time. Sometimes it is more open in form, but always a splendid flower. Another season it will open with a broader bloom, but whatever form it assumes, it is fine.

Grandiflora Carnea Plena. This is one of our best, and hard to describe. It has pink guard petals, with a mingling of many tints in the center. It is fragrant; globular and compact in form. It gives a long succession of bloom, and the flowers are fine keepers. The early ones grow lighter with age, and new ones come on, clothed in their showy tints, so that a single row gives such a variety of shadings that one might think there were several kinds in one fine blend of loveliness.

Golden Harvest. Rosenfield's. The more you see of this the better you like it. It is a free bloomer. You can depend on flowers the first spring after planting, even in six weeks after spring planting. At that stage of development it shows a center of pure gold. The next year it shows the same, only more. In the center is a miniature, snowy white flower, like a condensed Festiva Maxima, with dashes of carmine. The

next year the whole plant seems to break from all antecedents and give you a wild, rollicking prodigality of beauty, in blush and white, in cream and gold. The flowers are large and almost smother the plant, so great is their profusion. The bloom may not keep as long as some others, yet it will score all the points, as it is very fragrant withal. This and Floral Treasure are Rosenfield's advance guard. He has fifty to one hundred more in the procession, and we can take off our hats as they pass by and cheer for beauty and Nebraska.

Golden Wedding. We have long been looking for a pure golden flower, and here we have it. It is fragrant, semi-double, with extremely delicate bloom, and a very attractive flower. It is a very vigorous plant. Singles and semi-doubles do not keep as long as full doubles. This is the only drawback to this lovely flower.

Giganthea. Thus described by Ward: This is the finest early pink Paeony we have cut for flower purposes. It is one of the earliest to bloom, produces an enormous flower, six inches in diameter, on a long stem, deliciously fragrant, and fully as effective for decorative purposes as the finest chrysanthemum. This variety, with Festiva Maxima and Mont Blanc, bring the highest prices of any Paeony flowers in the New York market.

General Cavignac. Very fragrant, rose pink, of solid color, compact head, imbricated with a deeper shade, like a carnation.

General Lawton (Pleas). Bright rose pink, edged with white, often triple headed, which gives it a massive appearance. It is very robust, flowers large and slightly fragrant. Mostly held by W. A. Peterson, Rose Hill, Ill., who secured the stock from the originator.

Globosa Grandiflora. Large, globe-shaped, white and very fragrant.

Grandiflora Rosea. Is a host in itself. The outer and center petals are red. It is slightly fragrant. It is a very prolific bloomer, robust and vigorous. The flowers turn lighter in a few days, and remain on the stem a long time. Looking at the bed you would say there were several kinds. In this respect it is much like the "Seven Sisters" among the roses.

Grandiflora Alba. There are several kinds that bear this name, but the best is a strong, vigorous plant, with a good stem, and a large, fragrant flower. Pink guard petals, sulphur center, splashed often with crimson, the whole changing to snowy white in a short time. It is a good keeper and a prolific bloomer. These have been sold by the thousand, innocently too, by some of the best firms, for Festiva Maxima, which in full bloom they closely resemble.

Humea Alba. A very fine and rare variety. It has the beautiful blush of the morning. The guard petals are light pink. The center has a thread like collar of light flesh petals. It has a delicious fragrance. There are two Paeonys which bear this name.

Humei Carnea. There has been an infinite amount of confusion regarding this Paeony. At least six kinds have been sent out under this name. Many of our leading growers are at fault, and some writers also. Andre Laures has been sent out for it, and other varieties entirely at variance, and a recent work on Bulbs is entirely at fault. Yet it is one of the most distinct types of all. It has a foliage peculiar to itself. The

color is a rose pink. The petals look as if the color was varnished into them. It is a large, compact, solid, glorious flower, of symmetrical form and cinnamon scented. It ranks among the best, and scores the full five points. This is often confounded with the large M. Valliant. It should probably be called Thorbeckii.

Halseus. Is a French white. It first opens with a pinkish flush, gradually growing lighter.

Hesperides. Is white, with flesh guard petals.

Henri Demay. Is a striking and beautiful flower. Light crimson, fine form and symmetrical.

Hercules (Terry's). Is tall, light rose, tipped white.

Herman (Terry's). Is a tall, strong grower. Petals broad. Pale, purplish rose, inside straw-tinted.

Irma. Soft rose, flesh tinted. I secured this from France, and am well pleased with it.

Illion. Has white guard petals, and also narrow white center ones.

Insignis. Described in French catalogue as a grand flower, of brilliant carmine.

Jeanne d'Arc. Had a slight mention in former bulletin. We now hasten to do her justice. Some plants do best when the stools have had three or four years in which to become established. Then they burst forth in a very splendor of loveliness. Thus did our Jeanne. The flower opens light pink, but gradually grows white as the soul of the war maiden. The center of the flower rises like a crown, and the pure whiteness seems sprinkled with drops of blood, symbolic of the cruel death she suffered. It was a delight to visit those fragrant and lovely flowers and linger over them and drink in their sweetness.

Jennie Lind. Has suddenly sprung into prominence and value. Clear, rose pink, long stem, fragrant and good keeper.

Jugurtha. Is a dwarf, bright pink.

James Kelway. Very fine, white, beautifully scented.

Joan Seaton. Double, bright, cherry, rose, each petal edged with lighter color. A rose-shaped flower, showing anthers among the petals.

Juno. Is fiery, flashing crimson.

Jupiter. Is large, full double crimson, tipped light.

Kelway's Queen. Light pink, a most delicate and lovely sort. Very fragrant.

Kitty Green. Rosy lavander, large flower. Fragrant.

La Reine. Terry's. Delicate blush, changing to snowy white. Center light yellow, sometimes touched with crimson. We are well pleased with this fine, fragrant flower.

Lucretia. Light blush, good size, shapely, with a sort of twilight lingering in its petals.

Lady Curzon. We are favorably impressed with this flower. White guard petals, with cream colored inner petals, a faint blush permeating the whole flower at first. It is of good size, and delicately perfumed. Every way worthy of the lady whose name it bears.

Lady Alexander Duff. This flower has been spoken of as the very queen of the whole family. It is described by Kelway as lovely French

white, one of the largest and grandest in existence, tall, robust and highly perfumed. What more could we ask for? They cost $5.00 a root. What of it? We must have them. I had been informed by eastern growers that the firm was getting a little careless of late and was sending out mixed lots, so when I sent for some I included two of these famous plants, specifying if they had not the genuine article, that they return the money. They sent the roots labeled all right. I planted them with the greatest care, and fairly hovered over them. Never were plants more royally treated. I told my friends, "Now, we will see something worth while." Well, they opened. The stems were about a foot high, and the flowers were little, single, ten cent affairs. I found myself rapidly filling up with remarks, and the men to whom the remarks belonged were safely hidden behind the Atlantic ocean. I then addressed a few withering words to the insignificant little things that were posing like stupid donkeys in the place of prancing, high-stepping, thoroughbred steeds. Whether it was what I said, or because it was their nature, in two days they dropped their petals and went out of the business, and Lady Alexander Duff is on the other side of the sea.

Lady Bramwell is silvery rose. A most charming flower, perfect in form, compact, symmetrical and exceedingly fragrant. It is one of our fine ones. It wears well on a long acquaintance. There are hardly enough to keep up with the demand.

Lady Beresford. Described as a large-flowered variety of soft blush shade, delicate and beautiful. The petals are tipped in carmine. I sent for two of these. One was an inferior, little, single one, and the other a small pink.

Lyde. Is rose color, with pink center.

La Coquette. Is on the diamond list of Paillet, of France. Center and guard petals pink, balance salmon. A fine, large flower and a good keeper.

La Tulipe. I know of no flower so attractive in the bud as this. First a ball interlaced with green, red and light. As it grows, these interlacings are more pronounced. There is no bloom whose unfoldings you watch with greater interest. Men, women and children gather around it in delight. Finally it opens, a solid ball of softest blush, with streaks of carmine. There it sits in all its beauty, a glorious flower in a chalice of veined marble, emitting a delightful perfume. Gradually it fades to purest white, looking much like Festiva Maxima. It is a splendid keeper and scores the five points to perfection.

L'Esperence. Said to be almost, if not quite, identical with Duchess de Nemours. This is an excellent variety. In the first place it is a pink rose in form and fragrance. It is especially valuable in the northern states, as it is a strong, hardy and robust plant, and often is on time for Decoration Day. It is a good keeper. It is on the diamond list of the leading French dealer. It scores the five points.

Limosel. Very bright, clear lilac rose. A large flower, full double, with broad guard petals and narrower ones in the center. Very fragrant. Having had these for several years they stand up well to the description.

Lottie. Terry's. Large flower. Bright rose, full double, and a late bloomer.

H. A. Terry and His Paeony Field

MODERN PAEONYS

By Courtesy of Jas. Kelway & Sons

Mars. Terry's. Is a fine, purplish crimson, fiery and imposing in appearance.

Maud S. Is a fine, light crimson flower.

Morning Star. Is one of the most dainty of the whole family. Though exceedingly delicate, yet the plant is hardy. It is well named. Starry rays radiate from its heart of gold.

Mrs. Fletcher. Terry's. Is an attractive flower of deep, dark rose color. We have found it very fine.

Mrs. Rudd. Outside petals broad and white, inside straw color, petals finely fringed.

Nigra. Is one of the darkest crimson, full double.

Marie Crousse Very large, full, globular bloom; soft salmon pink, shaded with glossy lilac, very fresh color.

Marie Stuart. Beautiful anemone-shaped flower, with collar of bright, clear, pink petals; center sulphur white.

Madam Chaumy. Is a large, symmetrical, solid pink flower, fragrant and very charming. In form and color much like Lady Bramwell, only it is much later and larger.

Mme. Camille Bancel. Described by Ward: Very fiull, enormous, globular flower, color lively blush lilac pink, with center shaded with salmon.

Madam Geissler. Is light purplish rose, solid color, massive and very fragrant. One of Mr. Peterson's favorites.

Marguerite Gerard. Described by Ward: Immense flower, with very large, well formed petals; color clear flesh, fading to tender, creamy white. Center creamy white, with petals occasionally spotted and tipped with carmine. Ward & Shaylor place this high on the list. It is one of the more recent French productions.

Modeste Guerin. Large, anemone-shaped flower; color uniform, bright carmine. Very attractive, standing well up on the list.

Mons. Jules Elie. Described by Ward: Very large, full, globular flower, with broad, imbricated petalage. Color glossy pink, deepening at the base of the petals; reflex silvery pink; flower of nice form, and quite fragrant.

Mons. Paillet. Probably named from the noted French florist. It is a very large flower, light pink, shading to white, with pond lily fragrance.

Madam Muyssart. Fine, shaded pink rose, solid color; large, late and very fragrant.

Model de Perfection. Described by Peterson: Far superior to the sort generally sold under this name. A solid, clear pink, with crimpled center, set on large guard petals, forming immense globular buds and flowers on strong stems. Years ago we secured some of these from Mr. Peterson. They are eminently satisfactory. Hardy, full bloomers, fragrant and good keepers.

Marie Lemoine. The Lemoines are noted florists, but their names are a little too numerous. We have several among the Lilacs, also among the Philadelphus, and here the name is stretched to cover two entirely distinct varieties. One fathered by Calot is lovely, ivory white, an early bloomer, emitting a delicious fragrance, with a root tangled and twisted, and hard to separate. The other, fostered by Crousse, has a large, full

double bloom; color sulphur white; center petals lightly edged with pink. Very late and one of the very best.

Mrs. Frederic Davidson. Guard petals faint apple blossom tint, rest of the flower creamy white. One of Kelway's latest.

Mrs. Gwyn Lewis. Is another, described as a lovely, dwarf-growing, white flower, highly fragrant and of great merit.

Maria Kelway. Very fine, blush guard petals, yellow petaloids, with blush tuft, sweetly scented.

Madam Breon. There are two flowers bearing this name. One, outer petals rosy pink; pale yellow center, changing to white; and the other is fine, shapely, solid crimson. This latter was sent out by T. C. Thurlow.

Magnifica. Described by Kelway as delicate pink, turning to blush white: large, full and free. That usually sent under this name is nearer red, turning to pink.

Magnificent. Is a medium sized flower and fragrant. It is of the pink, cream and gold order, with drops of carmine. Much like Triumph de Paris, only smaller.

Madonna. Outer petals rose, center creamy chamois.

Moonbeam. Is one of Kelway's newer ones. Large, white, tufted in the center.

Maud Wild. Rosy pink, showing golden stamens.

Monsieur Deschamps. Is light purple.

Mme. Schmidt. One of Paillet's; is rosy, lightly tinted white, large flower; does well in Nebraska.

Marie. Is white, in light rose tints.

Maxima. Is white, with short petals.

Nymph. New. It opens a single flower, with white petals. It has a pond lily fragrance. In the center are incurved snow-white petals and these are dotted with crimson, making it a most attractive flower. Later, the inner petals expand, forming another perfect flower sitting in the lap of the first, separated by several rows of stamens. It continues in bloom a long time, and it is a delight to watch its varying forms of loveliness.

Noblissima. Is a fine flower of rosy lilac; very attractive.

Ne Plus Ultra. Is a fine flower, peach-color, edged with white.

Nivalis. Is pure white.

Princess Ellen. Opens delicate flesh, changing to white; large flower and a good keeper; very desirable.

Princess of Wales. Terry's. Large, white, mottled with rose; a fine flower.

Prince of Wales. Terry's. Purple, edged silver, large, full double, often in clusters.

Prince of Wales. Kelway's. Soft lilac rose; large flower, rather shy bloomer.

Princess Beatrice. Pink guard petals, inner petals yellow and pink; a fine variety and free bloomer.

Peter the Great. Is deep, rosy purple. Sunburns badly in Nebraska; needs shelter.

Plutarch. A satin crimson, exceedingly brilliant and striking, with pond lily fragrance; a very choice flower.

Pulcherima. Light, satiny rose, center blush white.

Pulcherima Odorata. Shaded pink, with yellow center and fragrant; very fine.

Pottsii. Purple crimson, with thread-like petals; a very conspicuous flower and in great demand.

Queen Victoria. Formerly Whitleyi, or the two are nearly alike. Described by Peterson as a full, strong, white flower, with yellowish-tinted center; a very popular variety among florists on account of good shipping and keeping qualities.

Red Jacket. As several deep crimson, new Paeonys have come into the writer's possession, he has named them after Indian chiefs. One is King Philip, a tall, robust plant; one is Red Cloud; one named Shabona; an extremely fine one is Pocahontas, and a dainty little single is called Pappoose. Red Jacket is a finely formed flower, deep rich color and very fragrant, which is a little unusual in deep crimson. I think it much surpasses, both in form and fragrance, the new Bunch of Perfume. The only drawback is, it may be a tardy bearer.

Sunbeam. New. Fragrant; radiant silver; ethereally beautiful; very striking.

Sainfoin. Kelway. Described as the most striking of all. The flowers full, large and brilliant self rose.

Snowy Coles. Blush white, with narrow, thread-like petals; very sweet.

Souvenir de la Exposition. Blush outside petals, with white, narrow central petals. A fine, large, imposing blossom.

Splendida. Light lilac, edged white

Sada Evans. Terry's. Outside petals broad, delicate rose, inside fringed and straw-colored, the whole melting into a beautiful white.

Stephania. Considered by Terry as one of his finest. Pale rose, nearly white; center pure white with crimson stripes.

The Bride. Is a charming white flower.

Thomas Meehan. Terry's Light rose, silver tipped; large double flower, worthy of the noble man whose name it bears.

The Amazon. New. If you wish size and show and a good deal of it, this is the flower. There is nothing refined or delicate about it. It is exceedingly prolific and robust, and bears an enormous burden of great, rose colored flowers. It is full, free, hearty and generous, and a good one for beginners.

Victor. Terry's Deep red; a fine, fragrant, solid flower, and a good keeper. Very desirable.

Virgo Maria. Pure, snowy white.

Victoria Tricolor. Is one of the most vigorous and prolific bloomers we have. The first year it will put out small blooms, according to the material it has. The next year they will be larger, and the third year the plant will be fairly deluged with bloom. It is also fragrant. Though the flower cannot rank among the finest, yet it is very desirable.

Victoria Modesta. Is a very fragrant flower, borne on a long, strong stem; outer petals pink, inner ones white.

Reine Victoria. Is a fragrant pink. These three Victorias, while

not ranking among the very best, yet on account of their fragrance and vigor, should not be omitted.

Zenobia. Terry's. Is rosy crimson, full double. A fine flower.

Zoe Callot. Is a Grandiflora Rosea, on a smaller scale. Outside and inner petals solid pale pink.

SINGLE PAEONYS.

These are very beautiful in the bed, but not so desirable as cut flowers. They are not as long-lived, and have a tendency to fold their petals at night, yet some of them are of marvelous beauty. They are not as popular in the west as in the east. I name a few of the leading ones from Kelway's list.

Bridesmaid. Single, white.

Captain Holford. Clear rose.

Countess Cadogan. Lovely flesh color.

Countess of Warwick. Delicate, soft flesh.

Doris. Bright rose.

Duchess of Sutherland. Large, flesh pink; a lovely flower.

Earl of Morley. Light purple.

Earl of Powis. Cherry rose.

Earl of Onslow. A good purple.

Flag of Truce. Pure white.

Flag of War. Deep, blood-crimson.

Ideality. Deep rose; grand.

Kimberly. A very pretty, rosy pink.

Lady Helen Vincent. White; tinged flesh; very beautiful.

Lady Jeune. Blush white; very delicate.

Lord Annaly. Deep crimson; a fine, rich shade.

Meteor. Bright, dazzling crimson.

Modesty. Delicate blush pink.

Mrs. F. J. Clark. A beautiful white.

Mrs. Richmond. A fine rose color; grand.

Mrs. Vernon Harcourt. Beautiful flesh color.

Millais. Maroon. First-class certificate, R. B. S.

Purity. A kind of purest whiteness.

Sir Angus Holden. Cherry color.

Sir Comer Petheram. Fine crimson.

Sir Edward Lawson. Pure rose.

Sir Robert Gresly. Rich maroon.

Stanley. A gorgeous variety of the richest and deepest maroon-crimson, with pure gold color stamens. First-class certificate, R. B. S., and Award of Merit, R. H. S.

Scotia. Deep rose. Very lovely.

Snowflake. Of snowy whiteness.

Victoria. Bright rose.

Defiance. Terry. Brilliant crimson; tall and fine.

Full Moon. New. This is one of the most striking, immense crimson, with strong outer petals and a full moon of golden stamens. A hearty, open-faced flower.

Terry. Is a sort of lilac rose, very rich color.

St. Sophia. Terry's. Is deep rose, and has the longest succession of bloom of any of the single family.

Wild Rose. Pleas. Is a fine, open-faced crimson flower, with a large, golden cushion.

May Davidson. Is a large pink, striped with silver.

The Queen. Terry's. Large white, with cushion of pure gold.

We have several others on the way, whose merits are not fully established.

THE JAPANESE PAEONYS.

These are a distinct family by themselves, single and semi-double, with very pronounced golden centers. They are prodigal bloomers, often covered with a profusion of beauty. They are very hardy. Some of us are endeavoring to raise a new race from seed, and here there is a vast field. The nomenclature of this whole family is in a chaotic state, and the Paeony Society is hard at work naming and classifying them. I have in all some thirty kinds. I append Henry Dreers' list:

Apollo. Deep pink, shading lighter toward the edges.

Diana. Blush, with creamy white center.

Exquisite. White, with yellow stamens.

Fabiola. Delicate blush.

Neptune. A fine shell pink.

Ophir. Dark carmine.

Saturn. Rosy pink, with yellow stamens.

Souvenir. Flesh pink; creamy white center.

Titian. Soft, delicate pink.

Vesta. Purplish red.

Topaz. Deep rose, shading lighter at the margin.

Undine. Bright pink, with darker shading.

CHAPTER XVIII

Perennial Flowers

The great west, at least, lies at the busy end of the world. When spring comes there is so much to be done we cannot stop to plant annuals. We want something that will stay planted. The time is not far off when farmers will pay much more attention to home adornment. Already country girls send to cities for flowers on festive occasions, as do their town cousins.

The other day a farmer asked a nursery agent what he had that would do for cut flowers. "We must raise our own," he said. "The girls send away to the florist's, and it costs, and we have to stop a team and go to town for them. We must raise our own." And he was ready to give a good order for Paeonys, Lilies, Gaillardias, Phloxes and choice white Dahlias. The man was right. His family needed flowers as well as others. There was no reason why they should not have them, and it

was much cheaper to grow than to buy them.

After years of testing, we have now many hardy things. Tulips, Pansies and Columbines come early. Gaillardias are a numerous family, and they work hard all summer. Phloxes bloom from June until November, and Lilies come along in the procession of beauty. What a wonderful family! All of them are easily cared for, and most of them do better with some mulching in winter.

The sweet little Tenuifolia Lily, from Siberia, is hardy up there, because it grows in the woods and is covered with deep snow all winter. It is tender in Illinois and Nebraska, because it lacks that snow mantle. So with many things. Give them a good mulching after the ground freezes, and you will succeed.

Many annuals come to their blooming in the middle or last of summer. They are not as well rooted as the perennials, and cannot as well endure the hot suns and winds as those deeper rooted. Again, most flower seeds are small, and it is very hard to make them germinate, for the ground will dry out before they can come up, and if this happens as they are sprouting there is a dead loss all around.

Most flowers of this class multiply by strong clumps, growing larger each year, and occasionally these can be divided and replanted, so that from small beginnings one can soon have an abundance at little expense.

Columbines

It is strange that such attractive and hardy flowers, so radiantly beautiful, should receive so little attention. They are easily grown, require but little attention, and repay all care and labor needed a hundred fold. Light itself has been dissolved, and all its prismatic rays have been woven into their bloom. I think one trouble has been they have not been planted on a scale large enough and in generous masses, so that their charms could be seen to advantage. People persist in getting a lonely flower and giving it the task of enlivening dreary surroundings. And the poor thing cannot show to advantage. Then no single one, beautiful as it may be, can represent them all.

Before my window as I write there is a large bed of them. Does one realize what a great family they are, over fifty native species? I have at least as many sorts. No flowers hybridize more readily. You secure seeds from a large variety, and then sow seeds from these, and you have a marvelous permutation of beauty. No two flowers of this second crop will be entirely alike. The bumble bees especially delight in their nectar. They seem almost intoxicated as they revel in it. Of course they carry the pollen from one flower to another, and the result is something new. There is an intense fascination in watching the various changes wrought, and to see the bewitching loveliness of some of the new arrivals. If one could sort out some of these and name and describe them, he could give some rare treasures to the floral world. By this process you would have the pleasure of forming new acquaintances whom no one else has yet met.

Let us take a look at some of these before us. That tall one, so striking in appearance, is the Chrysantha, the golden. The color is yel-

low, and not only that, there is a good deal of it. It is intense as though the flower had secured all it could and had packed and pressed it together in the most lovely form imaginable. What long and delicate spurs it has! We saw it growing wild in the Yellowstone National Park. There it was small and comparatively insignificant. But translated to our rich prairie soil, with good cultivation, it gives grateful response to our kindly attention. A flower does not blush as well unseen, while it "wastes its fragrance on the desert air," as when there are admirers to appreciate its beauty. Many a flower, comparatively unattractive in its wild state, will bloom in a prodigality of loveliness under the influence of cultivation and where it can be seen and enjoyed. The Picea Pungens, the king of beauty among the conifers, nowhere in all the mountains does as well as when transplanted in the rich soil of the prairie, or the eastern states, and receives the attention it deserves Then the needles are longer and the sheen is far brighter and more radiant than in its own habitat.

Here is another of attractive appearance, with long and delicate spurs. The petals are snowy white and intense blue It seems a photograph of the sapphire of the sky and the fleecy clouds. This is the Coerelia of the Rockies, and the state flower of Colorado. We often see these in masses at an altitude of eight or nine hundred feet. In many places they grow to great size, as some localities seem better adapted to their development than others. When taken down to the plains they need some shelter from the burning sun and hot winds. This variety readily hybridizes with others, and its motherhood is seen in many types in recent years. So readily does it cross that though the original plants will be all right, yet the progeny varies so readily and to such an extent that pure seed must be secured from the mountains if you would be sure. I keep a remote nook in the further corner of the nursery, as far removed as possible from the others, for their exclusive use; and even here there is some danger that the bees may find them, and I cannot be absolutely sure of all those grown from them, so I make it a practice to secure fresh seed every year or two.

There is one of deepest, darkest blue, so much so it is almost black. It is a large, solid flower. It has no spurs whatever. It is quilled like the Dahlia. Another is salmon pink lined with white, a gorgeous flower, and the blooms hang like lamps in a chandelier around the parent stem. Here is one that is a large, compact, snowy white. It is a full and prodigal bloomer, and near it is a single white, well spurred. In close proximity is one of deep blue, a single flower, with long, slender spurs, much like the Coerelia, to which it probably owes its parentage. In the crossing it doubtless got enough of the blue from one of those of deep azure to eliminate the white.

Yonder is a double maroon on a strong stem, and its color blends well with the garments of its neighbors. Here is a large, double pink of curious form, shaped like a tiny barrel. One is lilac color and semi-double. In short in color there are samples of the shades of almost all known to us. There is a tall, independent one, a sort of a blend of blue and maroon, lilac and rose color, showing that the pollen of several different ones had entered into combination to form one so fresh and rare.

Time would fail to describe them all. The Golden is less liable than others to enter into crosses. One reason is that it is so much later, and yet there are several that show its influence, and many of the golden ones have been somewhat swerved from their distinct form. These flowers commence blooming with the Tulips, and continue to flower for two months, while the Chrysantha will break out now and then all summer. Imagine if you can a blend of these charming colors in a mass of several hundred, some early, others late, some single and many double, many of them tall and others dwarfs. In color from purest white to deepest purple.

There is a Columbine Society at Boston, hard at work to have these adopted as the national flower. They are Aquilegia, related to our bird of freedom. They are Columbines, which sounds something like our own Columbia. Then we have quite a number of native varieties. So the society is making a strong plea. Many designs in decorations are taken from these flowers. And as one of the states has adopted one of the family as its own flower, this may be the beginning, and perhaps ultimately the Union may follow one of our richest states.

HOW TO GROW THEM.

Get a quantity of mixed seed and sow early in the spring. The seeds are small, and of course must be planted shallow. But here is the trouble, especially in the west—the ground dries before the seed can germinate. Contrive some way to keep the surface wet all the while, day and night, till they come up. But you had better trust to experts, who make it their business, and buy the plants, which can be had at very reasonable rates, three to ten dollars a hundred, and thus save a good deal of care and vexation and a year's growth, as they will bloom some the first season. Put in rows eighteen to twenty-four inches apart, and twelve to eighteen inches in the row, and they will soon stool out and cover the ground. It is best to mulch well with coarse manure after the ground freezes, and in the spring rake it between the rows. I do not always take this trouble, for they are very hardy. If the season is wet, some of the seeds, as they fall, may grow, and thus extend the area. The seeds have great vitality. Some sow them in the fall. Columbines are used a good deal for cut flowers, though they are not as good keepers as Paeonys. They are in season on the nation's great flower day, when we decorate the graves of our dead. Some late springs they are about the only out door flower we can use, as was the case in 1904, when they were in the full glory of their bloom in great masses.

So plant Columbines. There should be a flower procession from the opening of the Tulips to the hard frosts of autumn, and these should have a prominent place. The more you have of them the more you will admire them, and when you get well acquainted with them you could not get along without them.

Delphiniums

In our search for hardy perennials we have found this among the most showy and beautiful. If you travel in the Rockies you will meet these flowers in all their glory. In the rich valleys you often see them

PINK PAEONY. MODEL de PERFECTION
By Kindness of W. A. Peterson

GAILLARDIA GRANDIFORA

six or seven feet high, and the tall, strong stem lined with a covering of flowers of deepest blue.

This flower, sometimes called the Larkspur, has been much improved. In the Boston flower shows I have seen gorgeous specimens of grand, radiant flowers which seemed at great remove from our native plants. These tall ones are clothed with the splendor of sapphire, and so intense is the color it would seem as though all the shadings and tinting which could be extracted were there in a marvelous blending. I have some very rich specimens, which draw the attention of visitors. They are about six feet tall. Some are like great posts frescoed with bloom; others are branching, and all are grand. They follow hard after the Paeonys, and bridge the chasm between them and the Phloxes.

Over in England they have made great improvements in these flowers. By careful selection and hybridizing they have secured a race far superior to our native sorts. But though these choice strains may do well in the milder climate of that country, they do not winter well with us. But we have such a rich variety there is no reason why we also cannot improve, and thus secure hardiness with beauty.

I give the following as an English tribute to this flower:

Delphiniums.—As permanent subjects in the hardy flower garden we have few plants more worthy of special attention than the Delphiniums. For producing a striking display over a long season they are probably unique. For general effect in groups or beds they are extremely valuable as a whole, but one is easily carried away on closer inspection by the exquisite beauty of their flowers, particularly those with clear, sky-blue shades. Indeed, they have many points of excellence, any one of which alone should entitle them to popularity. But to appreciate their beauty one must see them growing, for it is almost impossible to convey anything like an adequate idea of their worth by mere description, and it is equally impossible to place their towering and densely-flowered spikes before the public at the summer exhibitions in a manner worthy of them. Those who have not the opportunity of seeing these plants in flower, or a collection of them well established, may form some idea of a group with the flower spikes five to eight feet high, and densely clothed for about half their length with exquisitely beautiful blooms. Of course the plants do not reach such perfection in the first year, but in the second year they certainly constitute the grandest possible display. While making the garden gay for a long season, they are in the greatest perfection in June and July, but a judicious selection of them may somewhat extend that period. Where seed is not required the plants should be cut down as soon as flowering is over, and in the late summer months many of them will yield another set of spikes, not so fine, of course, as the first ones. The shades of blue, both light and dark, are very numerous; others, again, have flowers of the deepest indigo and violet, while less numerous are those with bronzy and metallic hues combined with other shades.—Gardening Illustrated.

I here give place for an excellent article from E. Hemming, in Florists' Exchange of July 9, 1904:

Among hardy perennials the Delphinium, or Perennial Larkspur, has held front place for the past two weeks. Closely following the late varieties of Paeonys, they stand out as the most showy border plants blooming at the present time. A good, large collection of these plants is a sight to be remembered, especially when well grown and cared for. The exquisite shades of blue have to be seen to be appreciated While the named kinds grown so extensively in England soon die out and require great care to perpetuate them in this country, they are so easily grown from seed, and so invariably give good results if a good strain of seed is procured, that they should be better known among florists. A visit among the gardens along the Hudson revealed the fact that they grow exceptionally well in that locality, and spikes towering up to eight and nine feet high were not at all uncommon.

Delphinium Elatum, or Exalatum, is a native of North America. This is supposed to be the origin of the tall garden varieties, often called English Delphiniums, that have been so much improved by Kelway and other nurserymen.

Delphinium Formosum is of more branching habit, seldom exceeding the height of three feet, but a prime favorite, owing to its beautiful color, which is a combination of indigo, violet and sky blue.

D. Grandiflorum, or Chinense, as it is often called, is a very fine cut-leaved kind, having several varieties.

All the above are good, and well worth growing, being useful for cutting and attractive in every way, and the same treatment will suit them all.

Of course it is necessary to propagate named kinds by division or cuttings. This should be done in the very early spring. Growing them from seed, however, is the most satisfactory way. D. Formosum and D. Grandiflorum come fairly true from seed, producing very few poor forms if the seed is procured from a reliable source. The seed should be fresh, as it seems to lose its germinating power very rapidly. Sown in early spring, it will produce plants that will flower the first year. Of course the flower spikes are not very large, but sufficiently so to select the best to plant out in the position they are wanted to fill. When in a young state care should be taken to keep a sharp lookout for snails, as these pests seem passionately fond of the plants, and will make sad havoc of them in a short time.

Quite a percentage of Kelway's hybrids will come double from seed, but it is an open question if the double forms are superior to the single ones.

As regards the after treatment, or when they are planted in the open ground, deep, generous cultivation and good, rich soil is what they like; and, when planting, see that the crowns are well below the surface of the soil; one and a half to two inches is not too much. As soon as the plants have done flowering, unless they are wanted for seed, the flower stems should be cut down. This will induce a second crop of flowers. While perhaps not equal to the first crop, they will be found to be well worth looking after.

The seeds of this plant are quite small, and it is very difficult to

germinate them, as the ground dries up while they are sprouting. It is perhaps as well to get the plants in the spring and give them the best of care. They will bloom in good season.

Intense blue among flowers is a striking color, and is needed to cover the range of beauty. Many of our choicest families, like the Paeony and Rose, avoid that color altogether. But when you see the Delphinium in all its glory, with those rich tints, and all the delicate penciling and tracing done with nature's most skillful touch, you will feel that you have the link you need in the chain of beauty.

Phloxes

The signification is flame, on account of the brilliancy of the flowers. In the early days of Illinois, we used to see great fields of these plants in the fulness of their beauty. Along in the fifties I used to ride over the vast prairies of Minnesota, where there would be great flower gardens of thousands of acres, which filled the air with their fragrance; and the tonic of the fresh air laden with perfume, and the immense fields of growing beauty would bring a new zest to life.

In the Yellowstone Park there is a beautiful creeping Phlox, which blooms in spite of the frosts. It spreads out in clusters, often covering the rocks. It is flesh, or light pink, in color, and a very attractive flower.

The Phlox is a native of North America. It was taken to Europe, and in the hands of florists there, it has shown variations of form and color that are amazing. Its cultivation has great possibilities for the amateur. The family is so large and the variations so extensive that hybridization is yet going on. Securing some of the finest foreign ones, I find the seed from them will often produce new varieties as choice as many of those imported. Their improvement and development has reached that stage where, with a little care, we can have a marvelous diversity in form and color. Plant the choice varieties by themselves; save the seed, planting it under a screen in the fall, and you stand a chance of securing the same. Of course if you raise for the market you should wait till they flower, and eliminate everything not up to the parental pattern.

The Paniculata. Is a strong growing native variety.

The Maculata. Is of a more dwarfish habit. These two have been hybridized by European florists, till now we have perhaps a hundred choice kinds.

The Divaricata. Is yet another variety of our natives.

Phlox Drummondi. Was found growing in Texas by a botanical collector, Mr. Drummond. He sent the seed home, but soon after died of the fever, so this variety, which is an annual, was named from him. This has been greatly improved, and it is claimed that some of the finest perennials have a strain of the Drummondi. The plants should have the best of care. They need water in hot, dry weather. I have known them to stand up well under 110 in the shade, with the hot wind raging, provided they had plenty of water.

You have the time of blooming under absolute control, if you have

a large bed. When they are six inches to a foot high mow off a portion. This retards them, and you can vary this method to fit the time you wish them to flower. Again, you may have a bed a year old. These, if undisturbed, will bloom early. Then will come the fall planted ones, a little later in blooming. Then those planted in the spring. Lastly those grown from seed will take the remainder of the season, till the hard frosts of autumn.

The ground should be rich and well cultivated. The last of October is perhaps the best time. They should be well mulched for the winter. They should not stand more than two or three years before dividing and replanting. The heads have a curious formation. One set of flowers bloom and fall, and then another set, like reserves in an army, push out and take their places, and thus this relay comes on for weeks, keeping up a fresh, imposing mass of bloom.

SOME OF THE VARIETIES.—THE WHITE.

Independence. Is a full, snowy white, one of the early ones. It is a free bloomer and quite attractive.

Jeanne d' Arc. Is massive, fine and late, a great mass of purity.

The Pearl. Is another very fine one.

But the grandest of all is Fraulein G. Von Lessburg. This is far in advance of any white one yet produced. The flowers are of glowing, sheeny whiteness, and are of immense size, sometimes measuring nearly two inches in diameter. These are very rare, and so are quite expensive. But in this superb variety you have the very triumph of horticulture, showing the wide contrast between this new creation and the original stock.

Coquelicot. Is French for poppy. This is flaming, bright, orange scarlet, almost the color of the brilliant oriental poppy. They are the brightest of all, but our hot suns are most too much for them. They should have some shelter from the fierce heat of July.

Crepuscule. Has a flower larger than a silver dollar. It has a compact, massive head, as though it was one large blossom. The blooms are white, with violet shade, and a large, bright, carmine purple eye.

Huxley. Is violet purple, with a large center of pure white.

Esperence. Has a lovely shade of light lavender pink, with great lustrous eyes of white; compact, a free bloomer, and very beautiful. The head is like a great, solid, symmetrical cone of beautiful shadings.

Cross of Honor. This is not a large flower, but is very peculiar, on account of each petal having a clearly defined cross.

Eclaireur. Has flowers of immense size. They are bright violet purple, dazzling in their splendor. In the center are marks and stars. This, by some, is considered the finest of all. It is one of the earliest. The stem is dwarf, but not the flower.

The Gaillardia

This perennial is beginning to receive much attention, and with reason. There is no plant so susceptible of improvement. In England the Kelways have made marvelous success as regards size and color. They

have produced some five inches across. A bed of them presents a very lively and brilliant appearance. They are marvelous bloomers. I doubt if there is any flower which can give such an abundance of continuous bloom as these. Commencing in June, they are clothed in beauty until the hard frosts of Autumn. They endure dry weather well, and seem hardy every way. As cut flowers they are brilliant and showy and among the longest keepers.

Unlike most perennials, which require two years to come into flower, these, if sown in early spring, are clothed with a mantle of bloom in July. They need heavy mulching with coarse manure when the ground freezes. It would be as well to leave the tops on and throw the mulching on them, thus giving ventilation as well as protection. The seeds grow readily. A portion can be started in the house and then set out after danger of frost is over. Of course it is better to get the plants, but the roots are small, compared to the upper growth, and seem insignificant. Seed sown in the open germinates readily, and the plants become very vigorous and commence to bloom as soon as large enough. These flowers you can depend on. Others, like Roses, Paeonys and Lilies, have their season and pass on. But the Gaillardias take all the season, and when others fail, you can count on them. Though new to most people, I find they take well when ordinary floral displays are needed.

We have a Gaillardia growing wild in the valley of the Republican River. I have some growing, but they are not in bloom.

The Grandiflora. Is a fine, large flower. In color it is madder, maroon and gold, often with other tints. Some will have very open faces and others will have petals compressed at the base and expanded in the outer rim. It is easy to see how, with such a variety of form and color, selections can be made, and they can be increased in size. The English have pushed things so far that the most highly developed ones are not hardy. I think perhaps if these gorgeous ones were crossed with our own natives, we might have some of hardier strains. Should you ever get imported ones, I would advise you to take up the roots in the fall and store in boxes of earth till spring. I had quite a quantity, and even heavy mulching did not save them.

The Amblydon Gaillardia. Is an open-faced single one of deep, blood red. This seems quite vigorous. I have had seed sown in the open to make plants that bloomed well in July. Their brilliant color makes them very attractive.

The Picta Lorenziana. Is a double flower with a full cushion, richly variegated, and the intermingling of colors makes it very effective. As a cut flower it is a very long keeper.

Aurora Borealis. Has rays of gold, crimson and white, making it very showy.

Coccinea. Is scarlet.

These are the varieties which we mostly use. Plant in masses, either mixed or otherwise. Never depend on a single plant to cheer up a whole yard. I do not know of any flower which will give such bountiful returns for the labor bestowed, or that will produce more cheer of such long duration. In your collection, don't leave this out. I often have blooms of the Grandiflora over three inches across, and as no two

plants have flowers exactly alike in form and color, you have a charming diversity in both form and tints.

As you look over a bed of these different kinds, you note striking variations, both in form and color. For instance, in the double ones, some will be dark, some lighter, and some golden. By saving and planting seeds of these various types, you will soon have distinct strains.

Among the Grandiflora some are large and some small. By sowing the seed of the largest, you can soon increase the size. The process can be hurried, for you can raise two crops a year. For instance, those you carry over winter will seed so early that you can raise another set of plants, under screen, the same year. Even these raised from seed in the spring-time will produce seed in July, which can be sown, and these will make nice plants for the following year. So, by watching them closely, you can increase them rapidly, and soon have a wide variation in form and color. And there is certainly an intense fascination in this calling of new forms out of the unknown.

The Lily

There are about fifty species of this glorious flower, ranging in size from the attractive little Tenuifolium to the immense Giganteum, which must have five years to complete bulb, which throws up a stem six inches through and ten feet high.

There is also a wide range in the time of flowering, which covers a good portion of the summer. It is not practical to secure the whole of this family, but enough of the leading kinds can be planted to have a cheering variety.

One trouble has been in understanding them—their nature and needs. Siberian lilies are covered deep with snow in winter, so are those of the Rockies, and the natives of Minnesota and the North. There are fine ones growing in the woods of Canada. All these are carefully covered up with the snow mantle in winter, and this is the best covering ever devised yet. Now, take these same plants from their own habitat and plant them on the open, bleak prairies of the West and many of them will perish. The bare ground freezes deep. They are often planted shallow, and so they die for want of protection. Many are so hardy they will endure anything.

This is true of the Hemorocallis family and some others.

Generally, the soil is not prepared thoroughly enough, and they are not planted deep enough. Some dig a trench, put manure in the bottom, then some fine earth, then plant a foot deep, and cover with sand or light earth, so the plant can readily push its way up.

C. L. Allen, in a recent work, gives the following directions: "To prepare a proper home for the Lily the soil should be thrown out to the depth of two feet. Then, in the bottom of the trench, put six inches of cow manure; then put on twelve inches of well rotted sod; on this put two inches of clean sand; then plant the bulbs and cover with fine earth. But for the western prairies this is not deep enough." From my own experience, I think a depth of eight to twelve inches is preferable Only be careful of the kind of earth with which you cover them. If you

put on stiff clay it will be hard for them to bore their way through. Light earth, mixed with old and thoroughly pulverized manure, should be used. In no case allow the bulbs to touch fresh manure. Then, when winter comes, put on about six inches of coarse manure. In this way you will obtain protection for your bulbs, and, though the ground may freeze, they will not be near enough to "all out of doors" to hurt them. The bulb, like that of the Paeony, carries the life and sustenance of the plant.

Cared for in the way described, the lilies will retain their vigor, and all up and down the stem new bulbs will form. Never plant them on wet ground. Though they need water in a dry time, they cannot endure wet feet.

I think there is no soil better for their propagation than our rich, light, prairie loam. Here they bloom gloriously, and propagate freely.

THE TIME TO PLANT.

The Candidum, or Annunciation Lily, with its bloom of purest white, should be planted in its dormant condition, which is the last of August and the first of September. After a brief period of rest it begins to grow, and produces quite a tuft of foliage before winter sets in. We cannot speak too highly of this exquisitely beautiful flower. It is often used for forcing, to produce flowers for Easter. Its purity of whiteness and delightful fragrance make it a favorite. It does not seem to be a hard plant to raise. I have planted them, when badly grown, as late as October, and they did well, in spite of the shock of moving at the wrong time.

The Lily should not remain out of ground long before planting, and must never be allowed to dry. There is a great advantage in securing home-grown instead of imported ones, for, unless properly packed, they must suffer for being so long out of ground.

Some kinds do best with partial shade, while others flourish in the open. I have a grand one from the North Carolina mountains, sent out by Fred Kelsey. It does not do well in the open; it does not grow so tall or flower so freely as those under partial screen and good surrounding shelter. These grow to be seven feet high, with glorious clusters of freckled yellow flowers. They have a rich, soft coloring, and give them forest or native conditions, with plenty of water in a dry time, and they will be all you can ask for.

The beautiful Golden Funkai, or Day Lily, is an early one. It has a clear, yellow color. There is a another, much taller and later, which is very satisfactory.

One of the hardiest, most showy, as well as attractive, is the Elegans. It blooms along with the Paeonys, and goes into the wholesale business, covering the whole plant with a mantle of bloom. These propagate readily; the stem under ground has a string of bulblets on it. Dig up the whole; plant the larger ones for next year's flowering, and the small ones for another year's growth.

Then come the double and single Tiger Lilies. These are very robust, hardy and prolific of bloom. Up and down the stem tiny bulbs are attached, about the size of blackberries. Do you wish to multiply them as rapidly as possible? Then cut off these stems as carefully as possible, so as not to shatter off the tiny bulblets, and plant them in good, light soil, covering about two or three inches deep. The embryo

bulbs seem to feed on the stem, and in the spring they come up good and strong. It takes a couple or years or so for them to be large enough to flower.

The Pardanthus Chinensis or Leopard Flower rather belongs to the Iris family, yet it is called the Blackberry Lily. It is rather late, blossoming in mid-summer. It has a very pretty little flower, and when that is gone a blackberry takes its place, continuing the attraction of he plant. These berries hang on a long time. If you wish for moreof these flowers, plant the blackberries in the spring, and they will grow readily.

The Plantain Lily. Grows to have very large stools of beautiful foliage. They have snowy white blossoms, very much like the Candidum. They bloom in August.

The Homerocallis. Are strong plants. These do not have bulbous roots, but are propagated by root separation, and also by seeds.

The Tenuifolia. Is the sweetest and daintiest of all. Charming blooms hang like chandeliers around the stem. These roots are edible, and the traveler in the woods of Siberia finds a plant with a charming flower at one end and a potato at the other.

Many kinds do not multiply rapidly, though the root makes it up by producing seed, which can be planted in the spring, care being taken not to allow them to dry during germination.

I. Wilkinson Elliot, of Pittsburg, Pa., gives this description of a garden of Lilies:

A correspondent complains that we have told him too often of the lawyer's garden; but it is still the best garden in this vicinity, and a good garden cannot be told about too often.

Our friend, the lawyer, has a garden of Lilies. Many other things he has in his garden—great banks of Mollis and Ghent Azaleas that are worth a long journey to see; an entire hillside is covered with hybrid Rhododendrons and Kalmia Latifolia; Tulips, Daffodils and Crocuses are everywhere in the spring, and the glorious show of Japanese Irises in June is a sight not easily to be forgotten—but he has Lilies by the hundred and by the thousand, and in so many varieties that from June until November there is always a fine display of Lily flowers. Such a garden! By daylight it is splendid, by moonlight it is fairyland, and the air is filled with fragrance. Such a garden to visit, as we do visit it, and travel forty miles a dozen times a year, and come away with our arms filled with great stalks of Lily bloom. For this is a garden in which there are always flowers to cut and to spare. It is not the miserable garden of bedding plants in which its owner finds it difficult to cut a little nosegay to give to a friend. We wish you who are content to grow such commonplace things of so little beauty as Cannas, Geraniums, Coleus and Alternantheras, could visit this garden of Lilies, and then say what excuse you have to offer for your poor taste. Not that of cost, for Lily bulbs are to be had for as little money as bedding plants, and as Lilies are hardy, their first cost is their only cost, while bedding plants must be bought every season.

We are to remember this was written of the east, and that Azalias and Kalmias will not grow in the west.

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